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ABSTRACT

This document is the teacher's guide for SO 008 864. Developed for secondary students, the materials aid students in the understanding of the United States economic system. Along with the narrative found in the student materials, the guide presents objectives, concepts, procedures, and evaluation for completing the unit. The materials are arranged so that the earliest lessons deal with the most basic concepts and later lessons introduce variations and complexities of the major concepts. Chapter titles correspond to the student version of the materials. (Author/JR)

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Teacher's Edition

THE MARKET SYSTEM: Does It Work?

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Introduction

The Modified Market Economy of the U.S.

So many laws, standards, codes and regulations guide the conduct of business today that it's easy to lose sight of the fundamental economic forces at work in all commercial activity. Yet modified as it is, the market system of the United States still performs the basic function of pricing and distributing all resources, goods, and services available within society.

This module will illustrate how a market mechanism resolves the conflict between finite resources and infinite desires. It will show how supply and demand interact with each other in the marketplace. How competition among commodities and reserves available as well as among prospective purchasers influences pricing. And how the seller must adjust his desire to earn the highest possible price for his goods to the desire of the buyer to pay the lowest possible price (and vice versa).

It will also examine the influence of government regulation on the interplay of market forces, and show how the limitation of certain practices or the correction of irregularities and injustices affects supply and demand and prices of commodities available. The point will be made strongly that no matter how imperative or well-justified a specific law or regulation might be, it will exact its cost in the marketplace, to be paid ultimately by the consumer or producer.

Using the Materials

The materials are arranged so that the earliest lessons deal with the most basic concepts and the later lessons introduce the variations and complexities of the major con-

cepts. Each of the lesson plans is laid out in approximately the same fashion and includes these things:

Objectives: Each of the lessons states the objective, or purpose of the lesson. While they are always stated in terms of what the learner should know, or be able to do, at the completion of instructions, they are not strict behavioral objectives. At the same time though we have tried to stay away from such terms as "understand" and "to know." What does it mean to understand the market system? Does it mean to be able to figure an equilibrium price? Does it mean to be able to define the market system in the same terms the teacher used in his lecture? Terms such as "understand" and "know" are simply too vague to communicate a great deal to others.

On the other hand, there is considerable difficulty in sticking to strict behavioral objectives in the social studies. The task is easy in math, or even physical education. Indeed, it is even easy to state precise behavioral objectives in the social studies if one sticks to lower level cognitive objectives. The problems occur when one gets to the complex behaviors; the very behaviors which are important for students to exhibit.

These materials deal with this problem by simply stating as precisely as possible what we want the student to do. We feel the objectives do indeed give the lessons purpose and direction without getting bogged down in terminology. These objectives fulfill the need to communicate to others the intent of instruction, as well as giving the teacher some guidance in evaluating the students learning. A topic we will return to later.

Concepts: This section states what concepts are dealt with in each lesson plan. The major concept, or the concept which is the focus of the lesson, is given in bold type. Concepts which are used in the course of the discussion, or activity, are also stated.

A concept is an abstract entity which refers to the members of a particular group of things or ideas. It is a convenient way of grouping several things under the same heading and it is done on the basis of similarities, not differences.

Another important point is that concepts are human creations which allow one to organize and simplify percep-

tions. They make it possible to bring a wide variety of experiences and stimuli into an orderly pattern, and represent what one writer has called a web of conceptual ties. Thus, when students work with concepts they are learning strategies of organizing and dealing with the world. In this case the economic world.

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Procedures: In the conception of the classroom used here, procedures refer to what the teacher does in an effort to have the students accomplish the lesson's objective. If the teacher wishes to have the students achieve the objective then some sort of plan or design is necessary. This is called the procedure or teaching strategy. It is simply a plan of action. It is a description of what you, as the teacher, might do to help the students understand the material and reach the objective.

Evaluation: This section of the lesson plan calls for an informal assessment of the students achievement. It is not a formal evaluation device which is highly reliable and valid. Rather, it is simply something that will allow the teacher to gather some information about how well the class performed relative to the activity.

Too often a teacher does not realize that the students do not understand the material until after the unit test. This is simply too late. The idea here is that the more often the teacher gathers information as to how well the students are doing, the greater the opportunity to make changes in his teaching method.

Student Booklet Organization

At the end of each of the readings in the student booklet there are two special sections entitled "To Guide Your Reading," and "Some Questions to Consider?" These are designed to help the student understand what it is he has read. Some variation of this format is found in later lessons.

To Guide Your Reading: This is a basic vocabulary list of the words that will probably give your students some difficulty. This list may not be complete for your own classroom, or in some cases it may have terms that the students

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already know. Please feel free to add any vocabulary words you think will give your students problems. The ones in the booklet can be treated as a list of suggested terms.

There are several ways of handling this list. One way would be to ask the students to try to define them from checking on their meanings by looking them up in the booklet glossary, dictionary, economics book or by going over the list as a class. The glossary included in the booklet is limited because the philosophy of the total package is to promote research and inquiry skills beyond the scope of the materials.

Another way might be for you to simply define the words for the students. This is not a bad strategy if you are pressed for time but it does not allow the students to develop vocabulary skills. It should again be emphasized that one essential objective of this learning package is to encourage students to develop research skills. Thus much of the responsibility of vocabulary development should be rested with the student if long-run retention is an expected result.

Some Questions to Consider: The purpose of these questions is to make certain the student is reading accurately. Each of the questions deals with some fact, or point of information, that can be found directly in the article. It is not necessary for the student to engage in any high level behaviors like analysis, synthesis, or evaluation.

The answers to each question can be written out in a brief statement or handled very quickly in class. There should be very little need for any extended discussion. If you wish, this section and the vocabulary section, can be assigned as homework for the night preceding the lesson. It is more important that the students answer the questions than it is how they do it. You are the best judge of how to handle the specific teaching techniques.

The Market System of the U.S.

Teacher Notes

The fundamental assumption of economics is that all resources and commodities are scarce. There is never enough of anything to satisfy all the wants and needs of everybody, everywhere, at every time. Some mechanism is necessary for determining what commodities will be produced from the resources available, how much those commodities will be worth, and who will get them.

Scarcity

The ever changing world of the 1970's has caused the people in the United States to come to grips with the reality that the world of scarcity does exist. That America, the "land of plenty" must face up to some very difficult questions regarding the present and future allocation of resources.

The necessity for economic activity, production and distribution of goods and services, results from the varying human wants and desires of society. When one examines human behavior it appears that human wants are without limits. Although at times, we may acquire temporary satisfaction, most often we are desirous of obtaining something presently not in our possession. Often times we may observe other people enjoying something and we think our level of well-being would be elevated. A moments reflection would cause one to recall dreaming "If only I had that coat, car, motorcycle, boat, dress, suit, baseball glove . . .," I would be much happier.

The fundamental economic problem is that the means available for satisfying wants are scarce or limited. Regardless of the organization of economic system, there are limitations about what can be produced at a given time. Although

the U.S. is well endowed with natural resources, people are becoming increasingly aware that our wants go beyond our available resources. Many natural resources are running dangerously low. Thus, the world of scarcity does exist, and mankind must devise a system to enable the present and future population to make decisions regarding future resource allocation.

The Market System

The mechanism employed by some societies throughout the world is one or another variation on the market system. Here producers and consumers may bargain, either directly or indirectly, over the prices of resources, goods and services, using some commonly recognized medium of exchange.

In such a system, the desire of consumers to purchase a commodity helps set its value; when desire is great, the value is usually high, especially if a shortage exists in the quantity available. And as that value increases, producers of the desired commodity will be stimulated to provide more of it, since they will want to sell more at the higher prices. An increase in quantity reduces temporary shortages, in turn, will cause prices to level off, and even drop, since competition among consumers wishing to purchase will be eased as more of the commodity enters the market. Prices rise and fall in the market system both in response to fluctuations in consumer desire and product availability.

While a freely operating market system may be effective in setting prices and matching production to consumer desire, it provides little accommodation to the limited means of those consumers on the lower end of the economic scale, and it affords less than equal competitive advantage to all producers offering their commodities in the marketplace.

When a society or its government judges that the workings of an economy impose special handicaps on some individuals or groups, or that certain factions enjoy an undue advantage within the market, economic forces may be modified to compensate for the disparities in competitive ability.

Such a situation exists within the current economic environment of the United States. Anti-trust rules, labor regulations, product standards, minimum wage requirements, income supplements and other laws, programs and guidelines, all serve to encourage, restrain or augment the interplay of basic market forces. Yet with all its complex-

ities, the modern economy still provides for the essential functions of production, distribution and consumption, and the recognized principles of economics, as civilization itself still come into play.

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How a Market Operates

The basic purpose of a market is to bring producers and consumers together to exchange resources, products or services for other commodities of value. They may be either money, precious materials or other products or services. To accomplish this exchange, the desires of producers to maximize profits and the desires of consumers to purchase goods and services at the lowest possible price must be brought into harmony.

The bargaining which goes on in the market, whether expressed directly as in the bidding of an auction, or indirectly in selections between competing products, effects more than just the prices of commodities being offered currently. What consumers pay for products indicates the level of their desire or *DEMAND* for those products.

If for example, the price of milk jumped to \$5.00 per quart, and a large number of consumers (mothers of small children, for instance) continued to purchase milk at such an inflated price, it would be obvious that milk is a vital commodity and that many people desire it very much. Producers weigh such indications of consumer desire heavily in their planning for the future. What will be offered in tomorrow's market is directly related to the prices being paid in today's.

But once producers have determined which commodities consumers desire, they have to answer the equally critical question of how much to provide or *SUPPLY*. Again, they look to current market prices for some indication.

To illustrate: beef is a popular foodstuff in this economy, and many people are willing to pay quite high prices to obtain it, though as with any commodity, consumers will purchase more when prices are lower. However beef is expensive to produce, prepare and deliver to market. Feed, shelter, labor, and transportation all add costs at every step from farm to table, and those costs increase as more beef is produced. Although lower prices may stimulate sales, the larger quantity of meat may reduce potential profits which would not justify increased production; all of which makes

producers less eager to produce when prices decrease, in spite of the increase in sales which may result.

But somewhere on the scale of all possible prices which might be paid for a commodity there is one price at which it becomes profitable for producers to provide a quantity adequate to satisfy those consumers willing to pay. Economists call this the **EQUILIBRIUM PRICE**, the point at which consumer desire and the willingness to purchase, or **QUANTITY DEMANDED**, exactly equals **QUANTITY SUPPLIED** in the particular market.

The following table illustrates four possible price/quantity relationships in a hypothetical market situation. Column B lists the possible prices at which a particular commodity could be sold. Columns A and C list, respectively, the quantities consumers would demand and the quantities producers would be willing to supply at each stated price.

	A QUANTITY DEMANDED	B PRICE	C QUANTITY SUPPLIED
A.	20 units	\$ 5	0 units
B.	15 units	\$10	5 units
C.	10 units	\$15	10 units
D.	5 units	\$20	15 units

The table shows that \$5 is a price at which many consumers would purchase the commodity, but that producers would find it too low to be profitable and so would not supply any quantity at all. Similarly, many units would be purchased at \$10, but the quantity produced would not be sufficient to meet the demand. If the price were raised to \$20, however, producers would be eager to provide a large quantity, but most consumers would feel either that the commodity offered is not worth that price or that they simply cannot afford to pay so much. Few units would be purchased. The one price at which all the units produced would be consumed is \$15, which is the **EQUILIBRIUM PRICE** for this hypothetical market.

The results of such "bargaining" between producers and consumers are evident in any store or supermarket throughout the United States. Each item on sale was produced in anticipation of someone desiring to purchase it. Each price posted is a bargaining position in the endless negotiations between buyer and seller. If a store operator finds for instance, that all the beef in his stock has sold out quickly, he might decide that he can raise his prices and still sell the same amount, or sell less but make more profit. On the other hand, if sales are lagging he might find he has to reduce his prices in order to attract more customers

and recover at least part of his expenses before the meat spoils.

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Millions of independent production, distribution and consumption decisions combine to provide today's market with an astounding variety of goods from around the world, often at startlingly disparate prices. Yet the ultimate decision, and the one toward which all other economic decisions are directed, is that final choice made by the individual consumer: Which products will I buy at the prices offered? In the end, it is that decision which either confirms or refutes all the others made before.

Factors Affecting Supply and Demand

It becomes apparent early in any study of economics that conditions and developments in one area of a market exert great influence in other areas. The many factors of production, distribution and consumption are inextricably intertwined, the fortunes of every enterprise depend in ways both obvious and obscure, on the ups and downs of countless other economic activities. A shift in the quantity demanded for one commodity, or a reduction in its supply, will have its effect on another commodity, perhaps making it an attractive substitute for the first. And expectedly, an increase in the quantity demanded for the alternative product will put upward pressure on its price, stimulating many consumers to turn still elsewhere for less expensive commodities which can be substituted.

As always, we return to the fundamental assumption of economics: scarcity. If consumers wish to purchase more beef than is immediately available, beef may become scarce, relative to the demand for it, and prices will tend to rise—to a new **EQUILIBRIUM PRICE**. So, many consumers may wish to forego some beef in favor of some less expensive foods, perhaps chicken. Or maybe they will stop buying beef altogether and buy all chicken, or some chicken and some protein-rich grain products, such as soybean meat substitutes.

As consumers who would normally purchase beef compete more actively in the market for chicken and grain products, bidding up prices in the process, those consumers who would normally rely heavily on these less expensive commodities find they must look farther down the scale of demand for their substitute foods. They may purchase more beans and other vegetables, grains or less expensive innard

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meats, like chitterlings. The effects of such changes in consumer demand eventually work their way through the full range of foods available in the marketplace, increasing or diminishing the desirability of various commodities and re-adjusting their prices.

Of course, changes in taste also influence demand, as does a rise or fall in the general standard of living within a society. For instance, where beef was once considered a luxury item in the diets of most Europeans or Japanese, the substantial rise in incomes which most of these people have experienced since the end of World War II has fostered a growing taste, and the means to indulge it, for large portions of beef in their daily meals. They now compete actively in the beef markets of the U. S. and other major meat producing nations.

Such shifts in demand naturally influence quantity supplied, as producers tailor their production schedules and marketing plans to gear up for greater output of those goods whose prices are on the rise. But outside forces, as well, influence supply. Food production is clearly dependent on favorable weather conditions as well as on advances in agricultural technology. Likewise, technological developments effect industrial output, extraction of mineral resources, even the efficiency of service operations like transportation or communications.

A change in supply, for example, will result in a change in price and a change in quantity demanded. The Arab boycott in 1973-74 is an example of the multiple impact the average consumer experienced with the supply curtailment of one product, oil. This sudden, sharp reduction in the supply of crude oil resulted in upward pressure on the price of gasoline which had ripple effects throughout the economy. The repercussions of this Arab action was first directly felt by large numbers of people when lines of cars began to pile up around service stations. Later, in 1974, the tidal wave of prices began to gain momentum as consumers experienced the importance of increasing energy costs on the production and transportation of other products.

Although the price of a gallon of gasoline was held below the market equilibrium, the price of a gallon of gasoline went up. This increase in the price of gasoline, caused demand to shift downward in products such as large automobiles and put an increase or shift upward for alternative forms of transportation such as buses and railroads. The consequences of the gasoline problem extended into other related markets. For example, automobile related services: Filling stations, body shops, auto parts suppliers, drive-in movies

along with restaurants and fast food outlets which thrive in areas with a high volume of automobile traffic. In summary, the effect of the automobile is so dramatic that one out of every six jobs are related to this all-encompassing industry.

Eventually, even additional areas are affected, such as real estate prices, properties increasing or decreasing in value depending on proximity to transportation facilities or to the business establishments which rely on convenient access by automobile.

Additionally, the supply of one commodity influences the supply of others, not only through production changes aimed at meeting shifts in demand, but directly in the quantity of goods produced using other goods as ingredients or means of production. The supply of gasoline and other refined petroleum products is partially dependent on the supply of crude oil; the supply of bread is related to the supply of wheat and other grains; the supply of milk is somewhat dependent on the supply of cows.

Supply has indirect influences, also. Cows need feed to give milk, but they eat grains which are also used to produce bread, so the supply of grain available for animal feed competes with the supply available to bakeries. Likewise grain production is dependent on fertilizers, many of which are manufactured from petroleum, as well as on farm machinery which runs on gasoline. So, the supply (and, therefore the price) of both milk and bread is greatly influenced by the supply of oil, as well as on countless other factors in the complex web of economic relationships.

Modifying the Market System

All the examples drawn here are, of course, arbitrary and take no account of the influences of government on market forces. In real life, economic activity is constantly guided by laws and regulations, and government itself plays the role of supplier and demander in many and diverse economic situations.

The hand of government is probably most apparent in times of economic stress, when legislative power is applied to curb inflation, stimulate business activity or otherwise combat some prevailing economic ill. Mechanisms such as price supports and restraints or minimum and maximum

wage requirements all modify the interplay of market forces in fairly obvious ways.

Price supports tend to generate product surpluses, since producers wish to supply large quantities of goods at the artificially high prices imposed above the market equilibrium. As a result consumers then cut back their purchases or substitute less expensive products for inflated-price goods. Price supports imposed on farm products from 1929 to 1973 created huge surpluses in many food grains that had to be stored, shipped abroad and even destroyed. Because the artificial price floors stimulated suppliers to provide grain in excess of actual consumer demand, the grain market was never permitted to determine its true equilibrium price. As some prices for agricultural products have begun to drop in 1975, one may question the economic wisdom of Congress as agricultural price supports are again being considered as a policy alternative.

Restraints on prices, on the other hand, tend to create shortages, since producers see limited profitability in supplying large quantities of products whose prices are controlled, and thus cut back production or shift resources into producing goods which are permitted to sell at true equilibrium prices. Such controls on the price of beef resulted in severe shortages in meat markets during the summer of 1973, as cattle raisers refused to supply beef at the artificially low per-pound prices imposed by government regulation.

The effects of government intervention can be seen similarly in the labor market, though workers have considerably less flexibility in offering or withholding their labor than do businesses in increasing, reducing or redirecting production. Nevertheless, the supply of labor increases (which is to say, more people are willing to work) when the minimum wage is raised, though such a raise causes many marginal jobs to be eliminated by employers seeking to avoid the added expense. Likewise, workers are less stimulated to offer their labor when limits are placed on their potential earnings, especially with unemployment compensation, welfare payments and other income maintenance programs increasingly available to mitigate the hardships of unemployment.

Government influences the market system in less obvious ways. State governments may control interest ceilings on mortgage money which will then have immediate effects on the future availability of houses along with future home construction. In addition, tax laws with their myriad obligations, loopholes and deductions, hold vast implications for the conduct of business, the distribution of income and the

overall economic health of the nation, as do the welfare and other public assistance programs (referred to by economists as "transfer payments") that work their influence on the labor market.

Of course, government is also a major participant in the economy. As the nation's largest employer, it competes vigorously with private enterprise for workers in virtually every trade and profession, and accounts for a vast portion of the national payroll. With its agencies deeply involved in so many aspects of modern life, it consumes huge quantities of nearly every product available, virtually sponsoring entire industries, and exerting tremendous pressure on prices in nearly every market. As the supplier of public services, it maintains massive defense, police and other bureaucratic establishments, competes with private organizations in offering education, health care, insurance, finance and other services, and draws heavily on the nation's wealth to support its many diverse activities.

But perhaps government exercises its most far-reaching, though often subtle, influence on economic processes when it attempts to compensate for what are often seen as the shortcomings of the market system. One policy area the government has attempted to implement is some form of effective redistribution of income and wealth. However, the real impact of redistributing income has been somewhat questionable when income generated by the socio-economic groups at the top and bottom of the ladder are examined respectively over time.

Since the beginning of time, people have pondered the disparities in wealth and advantage between various individuals or groups; the question "Why does my neighbor have more than I?" is as old as society itself. Under the market system, the person with greater resources is able to purchase more and better goods, while the person with less is forced to make do with whatever is left. Increasingly, governments, and by implication the people who support them, have decided that such gaps in economic advantage should be narrowed. They have initiated various programs aimed at increasing the ability of people with limited resources to compete more successfully in the marketplace. These transfer payments (using the economists' term) shift resources from the more advantaged, in the form of taxes, to the less advantaged, in the form of direct payments, subsidies, vouchers, discounts, tax relief or loans (generally at low or no interest). This has the affect of improving the competitive position of those people who would otherwise be hardpressed to obtain the products they want and need.

Since transfer payments provide more people with the means to purchase, and the people who receive them generally have a more pressing need to purchase, they tend to increase the quantity demanded, thus they may put additional upward pressure on prices, which has the effect of a "hidden cost" of the government's attempt to correct the economic problem of income disparity. Such costs are very real and must be paid by everyone participating in the market, even those people whom the transfer payments are intended to benefit.

There are hidden costs attached to all government intervention in market processes, though by no means are they exclusive with government. Product standards improve the quality of manufactured goods, but tend to increase production costs. Anti-trust laws stimulate competition and restrain monopolistic practices, but dilute the financial efficiencies of big company centralization. Health and safety regulations obviously improve working conditions, and even benefit employers by reducing the costs of insurance payments and lost man-hours due to accidents and illness, but they add overhead expenses that must be recovered in the prices of the goods and services being produced.

It is the consumer who often pays the costs of government intervention in economic life; and correcting problems in the market system is expensive. But not to act when problems occur is expensive too, in both human and natural resources. The effects of income disparity are the growth of poor classes, increased crime, political ferment and social unsettling. The effects of unenforced health and safety regulations are unfit working conditions, accidents, occupational diseases, deaths and general worker discontent. The effects of unrestrained business practices are trusts and monopolies, lowered product quality, price-fixing, accumulation of wealth and power by elite classes and disregard for public interests.

All such problems have their influences on the market system, though they might not be reflected directly in the market's pricing mechanism. In fact, it's necessary to look beyond price structure to determine the hidden costs of any production or consumption—to what economists refer to as the concept of SPILLOVER EFFECT.

The cost of producing an automobile is basically the sum total of all the parts and materials used in constructing the car, the cost of wages and benefits to the workers involved, certain fixed overhead expenses such as factory space, equipment and utilities, and perhaps design and development costs or the expenses involved in distributing the

final product (a rough accounting, but one adequate for this example). But there are hidden costs of this production, too. Perhaps the automobile factory emits huge volumes of smoke and soot, polluting the air, dirtying windows, discoloring buildings, and aggravating the medical conditions of people with lung diseases or severe allergies. These are effects that "spill over" from the process of manufacturing automobiles, that generate real costs which are not reflected in the auto company's production expenses, but that somebody will have to pay.

Likewise, the price of an automobile is basically all the expenses incurred in production, plus a percentage of profit for the manufacturer and dealer, perhaps some additional preparation or transportation charges, and taxes. But as with producing, there are hidden costs of consuming, too. A car is really "consumed," after all, by being driven; and as it's driven it emits exhaust fumes, adding to the air pollution caused by the auto factory. It adds to the volume of traffic, contributing to the need for roads, police, traffic signals and other equipment, and it might even be involved in an accident, generating expenses of repair or medical treatment for the driver and possibly several other people as well.

There are all kinds of hidden costs, or spillover effects, attached to all kinds of production and consumption. The price of a candy bar might be only ten cents, but if the consumer of the candy tosses the wrapper on the ground, litter is produced, which generates clean-up expenses for the local municipality. This generated expense isn't accounted for in the market transaction by which the candy is purchased, but it is real and it will effect other transactions—in the labor market, for instance, when someone is hired to clean up the litter.

Of course, there are also positive spillover effects which create benefits beyond the immediate production or consumption of a product. If a family grows flowers on its front lawn, the various market transactions involved in producing and consuming the seeds register only the immediate consumption of that particular family. The benefit derived from the flowers could result in enjoyment to the household, neighbors and people traveling through the neighborhood. But keep in mind, the neighbors did not pay for the flowers. In addition, the household beautification program could result in increased property value.

Increasingly, government is attempting to moderate the spillover effects of both production and consumption and make the market system reflect hidden costs more accurately. Where other members of society absorb spillover costs, the

government might act to require manufacturers to put emission controls on both its smoke stacks and the cars it manufactures to reduce air pollution, as well as to equip its cars with safety devices to reduce injuries in case of accidents. The market for autos will reflect the increased production costs incurred in these measures with higher prices to the consumer. The candy manufacturer might be compelled to collect a tax on the sale of its candy bars to cover the expenses of cleaning up carelessly discarded wrappers which will add to the cost of candy in the market.

Government can act in many ways to confront many problems in the market system, but (at the risk of overworking an important point) there is always a price to be paid for any intervention in economic processes, and ultimately it is the individual consumer who pays it, either directly or indirectly.

Regarding goods or services resulting in spill over benefits the government might be compelled to encourage increased production. Considering our future transportation problems, the government is encouraging mass transit systems through large subsidies. The cost of one education is largely subsidized by governmental funds because an educated citizenry results in benefits both to the individual and society. Thus, when spill over costs result, the government discourages production. However, when there are spill over benefits, the government encourages production.

Introduction to Activities

The activities may be approached from a variety of standpoints, however, the intent of the author was to structure the activities into three primary areas:

1. Scarcity—the purpose of this section is to illustrate that scarcity is fundamental to all societies.
2. Market System—how the market system answers the fundamental questions faced by all societies—What? How? For Whom?
3. Role of Government—the objective of this section is to raise questions as to when and how government should modify our political system.

Money Trouble

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Objective, Concepts and Procedures

OBJECTIVE:

The student will examine the conflict of unlimited wants within a certain income budget and the importance of financial planning.

CONCEPTS:

Wants, income, scarcity, financial planning.

PROCEDURES:

The students will first read two case studies centering on two families who experienced budget problems because of poor personal financial management. After completing the newspaper reading the students (either independently or within groups) will develop hypothetical budgets from varying levels of income. After the students have read the two case studies, they will then develop hypothetical budgets for incomes ranging from poverty to upper income levels.

Introduction to Management of Money

Although money is sometimes called "the root of all evil," money is also an important tool necessary in today's world. Money does more than provide the medium of exchange for the goods and services we may need or want. It is directly related to our level of living and our ambition for the future. Sometimes during one's lifetime, each one of us may reflect and wish if only I had managed my money more carefully I would not be in my present situation.

In considering the problems of money management, read the following cases of: (1) Bill and Louise; (2) Ron and Marilyn.

Borrowing Trouble

More Consumers Find Their Debts Outpacing Their Ability to Pay

A Salesman Makes \$40,000,
Yet He Has to Retrench,
And Wife Gets Two Jobs

The Plight of a Policeman

By DANFORTH W. AUSTIN
Staff Reporter of THE WALL STREET JOURNAL

CASE 1—Bill & Louise

DALLAS—A year ago at this time, Bill and Louise were on top of the world and climbing higher. The 27-year-old real-estate salesman's annual salary was approaching \$40,000, and a franchise he held on the side promised more wealth soon. "We'd never seen that much money," Bill says. "It convinced me that I was going to be a big entrepreneur."

So, with great expectations, the young couple set out to buy a chunk of the good life: a \$60,000 home, a boat, new furniture, new clothes and what Bill calls his "toy," a Lincoln Continental complete with telephone.

That was last year. This year, Bill guesses he'll make about \$40,000 again. But it is unlikely the couple will see much of the "good life." The house is up for sale, the boat is gone, much of the furniture has been repossessed, and the Lincoln has been replaced by a Toyota (without a telephone). Louise, meanwhile, has quit her college courses and now holds two jobs, one of which is the midnight to 7 a.m. stint at a local electronics plant. And Bill, who tells their story in exchange for anonymity, admits to occasional bouts of depression.

What happened to Bill and Louise is unusual. After all, they owe nearly \$40,000. But their extreme plight points up a hardship shared by a growing number of consumers at all income levels these days: In varying degrees, their debts now outpace their ability to repay.

CASE 2—Ron & Marilyn

Take the case of Ron, a police officer in a Dallas suburb, and his wife, Marilyn. Right now, his monthly take-home pay,

which includes Veterans Administration assistance for night-school classes, is about \$900. Yet almost half that amount—\$400 a month—goes toward repaying nearly \$8,000 in installment debt rung up in the last several years.

How did they acquire that much debt? The couple tick off the answers: the death of a close relative, requiring expensive plane fare to the coast; furniture that fell apart within a year after purchase, leaving a \$300 balance due plus the cost of cheaper, if sturdier, replacements; an illness that forced Marilyn to leave a \$550-a-month sales job; some unexpected, and uninsured, major dental work; the birth of a daughter; and, among other things, an automobile with an annoying tendency to burn out valves.

"At one point last year, we thought we were caught up," says Ron, "but something else happened—I think the car broke down—and we went back under water."

After debt payments and expenditures for the basics—rent, utilities and food—Ron and Marilyn now have about \$100 left to themselves every month. However, Marilyn says, "we had been able to spend about \$35 a week on groceries, but with food prices up I'm afraid the increase is coming out of that \$100."

End Case 2

Nor does the immediate future appear any too promising for couples like Ron and Marilyn or even wealthier folks like Bill and Louise. In a report entitled "The Erosion of Consumer Wealth," two Goldman, Sachs & Co. researchers, Robert M. Giordano and Richard B. Worley, found that "there is little reason to expect that the pressure on consumers' budgets and, therefore, on their ability to leverage themselves against the effects of inflation will be relieved in 1974."

But the rate of increase in installment debt is beginning to slacken. For instance, in March, total consumer installment debt rose an adjusted \$617 million, less than the \$671 million increase of February and sharply below the \$2.04 billion rise of March 1973. These lower rates of increase are due partly to the automobile sales slump induced by the energy crisis. But experts believe that the softening figures may also indicate that many consumers have had enough and, in the words of the Goldman Sachs report, "are unwilling to further extend themselves."

There is also evidence that lenders are clamping down. Few banks are continuing to loosen up credit-granting procedures. Indeed, many of these institutions now say that in view of rising delinquencies, they're giving much closer scrutiny to would-be individual borrowers.

The Wall Street Journal, 6-4-74

Some Questions To Consider

Teacher Notes

1. Did these families live within their income? Give examples to support your position.
2. Did these families appear to be guilty of haphazard or impulsive spending?
3. Do you feel they could have spent their incomes more effectively?
4. Did either family appear to have an effective plan regarding present and future expenditures?

To enable students to experience the budgetary problems of a family, assign different income levels to each student or group and have them make a monthly budget for an assigned income level.

The classroom could be divided into hypothetical families of four (children—girl, age 8, and boy, age 15) with incomes ranging from \$5,000 to \$40,000. Have each consider their projected monthly expenditures in the following areas:

Projected Expenditures

Food:	
Housing:	
Transportation:	
Clothing:	
House Equipment:	
(Appliances, furniture, etc.)	
Health Care:	
(Medical, Dental, Prescriptions)	
Entertainment & Recreation:	
Other:	
TOTAL EXPENDITURES FOR ONE MONTH:	\$416.67/month with annual income of \$5000.

To Guide Your Reading

Franchise
 Veteran's Administration Assistance
 Installment Debt

Some Concluding Questions to Consider:

1. What do you contend is the lowest level of income to maintain a minimum standard of living?
 (STUDENTS COULD DETERMINE WHAT THEY FEEL THE POVERTY LEVEL IS AND COMPARE TO PRESENT LEVEL.)
2. What policies would you recommend for people whose income falls below the minimum?
 (PUBLIC EMPLOYMENT PROGRAMS)

MONEY TROUBLE

25

Land of Despair

Teacher Notes

Vignettes of Life in Bangladesh Add Up to National Tragedy

Objective, Concepts and Procedures

OBJECTIVE:

To enable the student to conceptualize that the meaning of scarcity varies from one society to another.

CONCEPTS:

Scarcity, wants, resources.

PROCEDURES:

The purpose of this learning experience is to have the students examine the concept of scarcity. Although there are a variety of possible teaching strategies, the procedure recommended is to have each student first define scarcity according to their own frame of reference. After the students have considered what scarcity means to them, the profiles from the Bangladesh reading should be assigned. This may be done either through a discussion or a written assignment. After completing the questions regarding the five profiles, the student should return to his original definition of scarcity and then be given the option to modify the definition as originally developed.

The concept of scarcity can have a variety of meanings to different people. In the following exercise you will examine a society you have probably heard about or observed on your television screen. To many of these people the conflict between their wants and available goods may be a morsel of food to enable them to survive to the next day. The excerpts are from *The Wall Street Journal*, November 26 and 27, 1974.

Teacher Notes

The Nun's Tale

An Irish nun is visiting Bangladesh, staying at a Christian hostel in Dacca. On her second evening in the city, she steps outside for a breath of air and finds an emaciated baby deserted on the doorstep. She takes the baby in, feeds it, doctors it, bathes it, and then goes out searching for the mother, who is nowhere to be found.

The next morning the nun finds a second starving baby lying in the street in front of the hostel. So she takes the second baby in. Then she goes off to the local police station to report the missing babies and to seek advice.

That advice is to put the babies back in the street or, the police officer says, you will find four more babies tomorrow.

"What on earth am I to do?" the nun says later in the day. "Am I to put them out to starve?"

1. If you were the nun, what would you do? In considering your alternatives, consider the advantages and disadvantages.

(POSSIBLY HAVE STUDENTS LIST:)

Alternative	Advantages	Disadvantages

2. Assume you were a social worker in Dacca; what recommendations would you make?

The Aid Official

Teacher Notes

He has spent much of his working life in Bangladesh, and perhaps for this reason—and because he likes the Bengalis — he searches for some signs of hope. Bangladesh, he says, might increase food production with high-yield rice strains; it has “cultural homogeneity” and physical compactness that make it “governable”; it has a resilience that comes from centuries of hardship.

“But the population thing,” he says, “that population thing just blows your mind.” He shakes his head slowly and adds: “Just imagine—230 million Bengalis in 30 years.”

What about aid? he is asked.

“We have to keep giving it,” he says. “Maybe it doesn’t accomplish very much. Maybe it only postpones the inevitable. But if a man passes you on his way to getting hanged and he is thirsty, you still give him a drink, don’t you?”

1. If you were responsible for future policy in Bangladesh, how would you direct future planning of production?

(STUDENTS MIGHT CONSIDER THE TRADE-OFFS OF INCREASING FOOD PRODUCTION WITH HIGH-YIELD RICE OR DIRECTING MORE RESOURCES TO POPULATION CONTROL.)

The Priest

He has been working in the villages of Bangladesh for more than a decade, and there is an intensity about him that conjures up visions of some medieval martyr.

Through a long, late evening, he talks of the misery he sees all around him, the worsening economic conditions, the widespread hunger in the villages, the seeming hopelessness of a nation with too many people and too little land or resources. At times, he is cynical: "A line was drawn around a slum, and it was proclaimed a nation." At times, he is fatalistic: "These people are like their rice. Sometimes it bends with the winds, and sometimes it breaks. Sometimes it survives the floods and sometimes not."

At one point, he even asks: "To be realistic, does it really matter if a million Bengalis die? Would it matter more to train a dozen dedicated Bengalis who would go out to change the future?" He has great doubts about the value of relief aid, about the logic of "keeping people alive today so that their children can starve tomorrow." Like so

many conversations in Bangladesh, it is both depressing and inconclusive.

Early the next morning, a messenger arrives from a nearby village. A child is dying, and the priest is needed. All the doubts of the previous night seem to be forgotten. It is an hour's hike to the village and there, in a thatch hut, lies a girl of about 12, fevered, wasted, but still alive.

The girl is a Christian, and the priest kneels down on the mud floor to hear her confession and administer the last rites. The Latin ritual doesn't sound as out of place as it might seem. The priest then sees to the construction of a primitive litter, and two village men carry the child back to a small mission hospital.

It is noon when the priest returns to the mission. He has spent a half-day attending to one sick child when, in the same village, there are other children hungry and sick who almost surely will die in coming weeks —when, in Bangladesh, there are some millions of sick and hungry children.

"You do what you can," the priest says. "And that is all you can do."

1. How does he describe scarcity in Bangladesh?
("A NATION WITH TOO MANY PEOPLE AND TOO LITTLE LAND OR RESOURCES.")
2. What does he mean when he raises the question, "does it really matter if a million Bengalis die? Would it matter more to train a dozen dedicated Bengalis who would go out to change the future?"

(THE PRIEST IS ATTEMPTING TO FACE A CLASSIC TRADE-OFF REGARDING THE USE OF THE AVAILABLE BANGLADESH RESOURCES. WOULD RESOURCES BE BETTER UTILIZED TO CONCENTRATE ON TRAINING A FEW PEOPLE FOR FUTURE PRODUCTION OR CONTINUE GIVING AID WHICH ENABLES PEOPLE TO KEEP ONE-HALF STEP AHEAD OF STARVATION.)

The Civil Servant

Teacher Notes

Mr. A. is a senior civil servant. As such, he can recommend policies and he can try to carry out policies, but he cannot decide policy matters. That's up to the politicians. And Bengali politicians, more than most others, it seems, favor making no decision at all.

So Mr. A., who has seen a lot of recommendations ignored and a lot of plans shelved, conveys a sense of weariness and resignation. "Bangladesh was born under very unlucky stars," he says. "Our adversities come in battalions. Of course, we must make some unpopular economic decisions, but for a poor country, it is very hard to do so. If we were richer, we wouldn't reel under blows, but we already are tubercular, emaciated, exhausted. We are trying to do what we can, but the difficulties are too many. The road is strewn with thorns. What is that American song--'the road is rocky'? Paul Robeson sang it, didn't he? Yes, it is a cruel and rocky road for us."

1. The civil servant makes reference to unpopular economic decisions; what does he mean if we were only richer?

(CLASS COULD CONSIDER THE THREE RESOURCES NECESSARY FOR PRESENT AND FUTURE PRODUCTION AND CONTRAST THOSE RESOURCES AVAILABLE IN THE UNITED STATES AND BANGLADESH.)

LAND—LIMITED AVAILABILITY OF NATURAL RESOURCES

LABOR—TOO MANY PEOPLE AND FEW WITH NECESSARY TECHNICAL SKILLS

CAPITAL—CANNOT OBTAIN WITHOUT FOREIGN AID BECAUSE PRESENT PRODUCTION LEVEL KEEPS ECONOMY AT SUBSISTENCE LEVELS.

The Mad Bihari

She lives in a tiny three-walled mud hut in a refugee camp on the outskirts of Dacca. Every morning, dressed in only a tattered rag wound round her waist, she picks her way through the mud and filth of the camp and arrives at the office of the camp chairman. There she requests food for her three children.

And every morning the camp chairman refuses her request.

"I have no rations to give," says the chairman. "Of course," he adds, "she no longer has any children to feed. She had three children but they died last year because they had no food. Since then she is insane."

The mad woman is one of some 400,000 Biharis who still languish in refugee camps around Bangladesh. The Biharis are non-Bengali Muslims, originally from central India, who were a privileged minority here in pre-independence days and who generally supported the Pakistan army during the 1971 war. After the war some Biharis were massacred, but most were confined to camps to await some resolution of their fate. It is now three years later but little has been resolved.

The Biharis claim to be Pakistan citizens and demand to be "repatriated" to Pakistan. This is fine with the government of Bangladesh, which would like to be rid of them. Pakistan, for its part, has accepted about 120,000 Biharis refugees but does not accept the principle that Biharis are Pakistani; it refuses to take 400,000 more Biharis. The last thing any nation on the sub-continent needs is more poor people.

There is little chance for the Biharis here. Millions of Bengalis are seeking jobs and so there are almost none available to Biharis. "All we can do is beg," says the camp chairman, "but Dacca is full of Bengali beggars and we get nothing." International relief agencies initially provided food for Bihari camps, but foreign interest has dwindled, and the agencies now channel what aid they have to starving Bengalis.

So the Biharis sit and wait—and watch their children die of hunger and disease. "Should we be left to starve to death in these camps?" asks the chairman. "In whose hands lies our future? Whose? There must be some solution for us."

But there seems to be no solution at all to the problem of a pathetic minority in a pitiable land.

1. What appears to be the long run fate of the Biharis?

2. How does the plight of the Bihari differ from the other Bangladesh profiles?

To Guide Your Reading

Teacher Notes

Bangladesh

Resources

Rationing

Biharis

Evaluation

The evaluation could be associated with the original definition of scarcity. The student could fold the paper in half (narrow width); write their original definition, and then after completing the exercise, write their new definition on the other half of the paper. The students could then justify why they may have altered their conceptualization of scarcity.

Have-Nots in Revolt

Teacher Notes

Objective, Concepts and Procedures

OBJECTIVE:

To have the students examine the difference between discrimination in the marketplace and societal discrimination.

CONCEPTS:

Discrimination, productivity.

PROCEDURES:

The student will examine the statements from a black leader, Imamu Amiri Baraka. In the reading, he directs most of his criticism of income inequality to the inadequacies of capitalism. The strategy will be to first have the student read the summary interview and then respond to some values clarification questions.

INTRODUCTION

As one examines today's society in America, one of our most perplexing problems is the unfair treatment of certain minority groups. Why do we have discrimination—Is it because of the inadequacies of the market system, or something more deeply entrenched in people's values that goes much beyond our economic system. The reading, "Have-Nots in Revolt" gives one perspective from a Black leader. After reading his summary, examine some questions following the reading and ask yourself to hypothesize some of the causes for Haves and Have-Nots in today's society.

A Black Leader Foresees an America With...

Have-Nots in Revolt

IMAMU AMIRI BARAKA was born Lerol Jones in Newark, N.J., 40 years ago. He gained his reputation first as a jazz critic, then as a poet and playwright. *Dutchman* won the Obie as the best American play of the 1963-64 season. Soon after, his dramas turned darker, then became firmly antiwhite. His art became polemical and its message one of black separation, black liberation.

Baraka returned to Newark, where he was arrested during the 1967 rioting for illegally possessing two pistols. Convicted and sentenced to three years in prison, he was retried and acquitted. He became politically active in Newark and nationally as secretary-general of the National Black Political Convention and chairman of the Congress of Afrikan People. He recently astounded and angered some of his followers by coming out as a follower of Marx, Lenin and Mao. Staff Writer Michael Putney recently met with Baraka at his Newark headquarters and talked with him about that turnabout and other things.

In 1968 the Kerner Commission predicted that America was headed toward two societies, one black and

one white. Do you think that has happened? Or have we headed toward a society of haves and have-nots?

I think the latter. It was a society of white and black. But what I think the commission was trying to do was put the onus for the problem on racism. And that was really a trick because we believe that the onus is on the economic system. But we do feel that all the people in this country—the white people, the blacks, the Puerto Ricans, the Mexicans, the Indians, the Asiatics—all the people are finally going to be the ones to benefit from this total kind of society we see. We feel that when people talk about a pluralistic society that one day it is going to be a pluralistic society in the real sense where everybody will have the democratic right of self-determination.

You've been a black liberal, a black radical, a black separatist, and now you're into "scientific socialism" and what you call Marxist-Leninist-Mao Tse-tung thought. What is it?

Basically, it says this: Capitalism, because of its internal contradictions, will produce a class of people that will destroy it. Everything

has contradictions, which is dialectics, and capitalism has one very profound kind of contradiction: The contradiction between the public nature of labor—that is, you have to use the masses to work—but the money that's made from the labor, the profit, is appropriated privately. And by a very few. The rest of us have to spend our lives laboring and we don't own anything. The only thing we own is our ability to work. And if you can't work, you're out of luck.

Well, how are the people whom you think are exploited going to wrest some of the control and the profits from the system?

By revolution. That's the only certain way that socialism will come to our society. That is, when the masses of people, the great working mass which capitalism produces, property-less wage earners, and these are the very people who will destroy it. When these masses of people will

no longer accept the system as it is and the system reaches a crisis where it can no longer govern as it used to, then that is the point at which revolution is made.

How close are we to being at that point?

I don't think we're very far. I don't think we can play the numbers game, but I think if you'll just go back 10 years ago to 1964 and run through your mind the kind of things that have happened since 1964—from Kennedy No. 1 to Kennedy No. 2 to Malcolm to Martin Luther King to Portuguese colonialism. And now you've got Portuguese Guinea, Mozambique, and Angola being liberated, Lyndon Johnson thrown out of office, Nixon thrown out of office, Rockefeller as Vice President. I mean, in 10 years we've had such a rapid-fire succession of events that 25 years in this particular epic that we're in is going to see huge changes throughout the world.

The National Observer, 3-15-75

Some Questions To Consider

1. What do you think Baraka means when he contends the problem of a society of "haves and have-nots" is not because of racism, but the economic system?
2. Consider two hypothetical situations looking for summer employment:

(1) You are black, 20 years old, no special technical skills, graduated in top 10% of class, participated in football, basketball and track, finished one year of college.

(2) You are white, 20 years old, same in every respect as above.

If you were an employer for the summer recreational program, which one of the above individuals would you hire, and explain why?

3. Consider both individuals graduate from law school with honors, which one would most likely succeed? Will one's probable success be due to the economic system or factors unrelated to the market system?

EXAMINE TABLE 1

Teacher Notes

TABLE 1
Percent of Income Received by Each Fifth and Top 5 Percent of Families in Selected Years, 1950-70

Quintile of families	1950	1955	1960	1965	1970
Lowest fifth	4.5%	4.8%	4.9%	5.3%	5.5%
Second fifth	12.0	12.3	12.0	12.1	12.0
Third fifth	17.4	17.7	17.8	17.7	17.4
Fourth fifth	23.5	23.7	23.6	23.7	23.5
Highest fifth	42.6	41.6	42.0	41.3	41.6
	100.0%	100.0%	100.0%	100.0%	100.0%
Top 5 percent	17.0%	16.9%	16.9%	15.9%	14.4%

Source: U.S. Department of Commerce, Bureau of the Census, *Statistical Abstract of the United States, 1972*, p. 324.

1. Considering the people represented on lowest fifth quintile, what would be some general characteristics of these people?

(MINIMAL EDUCATION, BLACK, LOW SKILL EMPLOYMENT . . .)

2. Considering the data in Table 1, and the reading, how would you summarize the current problems of the "Have-Nots?" What factors may contribute to some individuals being locked into low income employment?

(DISCRIMINATION, LIMITED SKILLS TO MARKET.)

3. If you were a policy maker, would you consider the alternative of revolution or some other means to elevate the standard of living of the have-nots?

To Guide Your Reading

Polemical

Kerner Commission

Capitalism

Dialectics

Evaluation

TABLE 2
Median Family Income

Year	White	Black	Ratio of Black to White
1947	\$3157	\$1614	51%
1952	\$4114	\$2338	57%
1958	\$5300	\$2711	51%
1960	\$5835	\$3233	55%
1961	\$5981	\$3191	53%
1965	\$7351	\$3896	54%
1969	\$9794	\$5999	61%
1971	\$10,236	\$6279	61%

Source: U.S. Bureau of the Census, *Current Population Reports, Population Characteristics*, Series P-20, No. 204. Washington, D.C.: Government Printing Office, 1970, p. 4. Data for 1971 from *Monthly Review*, Federal Reserve Bank of Richmond, October 1971.

1. Examining Table 2, summarize the general trend regarding the relative incomes of whites and blacks from 1947-1971.

2. Why is the level of unemployment for blacks always approximately double the level for whites, regardless of recession or prosperity?

(STUDENTS SHOULD CONSIDER DISCRIMINATION ALONG WITH THE SKILLS OF BLACK WORKERS IN GENERAL.)

The Wooden Dilemma

Teacher Notes

Objective, Concepts and Procedures

OBJECTIVE:

The student will be able to state how the interaction of supply and demand of a given commodity affects the price at which it is sold.

CONCEPTS:

Demand, Supply, Market System, Buyer, Seller, Price.

PROCEDURES:

This lesson is a game which is a simple simulation of a market system. The point is not to duplicate the market system in all of its complexities but rather to make it possible for students to engage in an activity which will help them gain some basic understanding as to what the market system is all about.

The game is played in the first part of the activity and in the following discussion the students will be considering a real situation that took place in Oregon last year. As a result of both the game and the discussion the students should be able to make some basic generalizations regarding the interaction of buyers and sellers in a marketplace and how the market price is determined.

Simulation Game Instructions

This game basically involves the operation of a market involving the buying and selling of firewood. Sellers will represent businessmen who have a supply of trees available for firewood and buyers will attempt to buy firewood for their individual households. Each buyer or seller will be given in-

Teacher Notes

structions to buy/sell one cord* of wood for not more/less than a specified price. The instructions on the card must be honored. The game will consist of a competitive market and each person will be competing against one another.

The class will be divided into buyers and sellers (one-half in each category). To easily identify buyers and sellers, it is recommended the buyers and sellers be identified by arm bands or colored tags. Each buyer will be given six receipts as illustrated:

RECEIPT	
Buyers Name	
Sellers Name	
Price	
Time	

After each transaction the receipt will be filled out and kept by each buyer. The transaction price will then be reported to the person recording on the board. It is advisable to have all possible prices on the board and record on the board as each sale is made. In addition, each seller should have ten receipts before the game begins.

Rules

1. Sellers will have white instruction cards:

SELLERS' CARD
You are selling one cord of firewood. Try to obtain the highest price possible. Do not accept less than \$..... cord.

Print up three cards for each price:

\$10	\$25	\$40	\$55	\$70
\$15	\$30	\$45	\$60	
\$20	\$35	\$50	\$65	

*A cord of wood represents 8x4x4 ft. To visualize the size of such a woodpile, you may consider a large couch 8' long, 4' wide, with a wood stack 4' high.

2. Buyers will have blue instruction cards:

Teacher Notes

BUYERS' CARD

You are buying one cord of firewood.
Try to obtain the lowest price possible. Do not purchase for more than
\$. cord.

Print up three cards for each price:

\$10	\$25	\$40	\$55	\$70
\$15	\$30	\$45	\$60	
\$20	\$35	\$50	\$65	

3. Sellers and buyers should not discuss their instructions with anyone else playing the game.
4. A transaction is completed when a single seller and a single buyer agree on terms of the sale. (ALL SALES MUST BE FOR ONE CORD AT PRICES ROUNDED OFF TO THE NEAREST \$1.00).
5. As soon as your transaction is completed, you should turn your buy/sell order over to the student at the board and receive a new one and attempt to make another transaction.
6. If you have not made a transaction in three minutes, you may turn in your slip and negotiate another transaction.
7. A one minute warning will be given before the market is closed.
8. Each buyer will be required to make five transactions to heat his home for the entire winter.

Hints for the Teacher During the Game

The role of the teacher during the game should be to move about the room and answer questions. To maximize mobility of buyers and sellers, it is recommended that desks be pushed to create an open arena. The game should be full of action as students actively compete against one another; however, if necessary you may stop the game to give a short pep talk to increase competition.

Another important element that could be illustrated is the importance of price information. To account for this factor assume the market is open for fifteen minutes, divide the

Teacher Notes

market into intervals of five minutes each. Then compare where transactions were made as the game progressed.

After the game is completed, the buyers and sellers should tabulate their results and determine their average selling and buying price. The winner will be the buyer that had the lowest average price (at least five transactions) and the seller with the highest price.

For a later activity have the students copy from the chalkboard the number of sales transacted at each price. A student who has math capabilities could then compare what the market equilibrium price was relative to the game equilibrium price.

Post Game Activities

Since the game will take approximately one period, the students can now have an opportunity to reflect on how their market relates to the real world. Along with having them read the article, "Wooden Reaction" you may desire to have them respond to the following questions:

1. Yesterday in the market game some of you were buyers of wood. Assume you were living in Oregon, what factors in "Wooden Reaction" would cause your demand for wood to change?

(RISING COSTS OF FUEL, LOW TEMPERATURES, CONCERN ABOUT FUTURE PRICES OF FUEL)

2. The one dealer stated, "It's panicsville." Were there any situations where panic prevailed in your market game? If so, what effect did it have on price?

The elements of "panicsville" may be related to gasoline; why were people lining up at service stations for gasoline?

(OFTEN TIMES WHEN THE MINUTE WARNING IS GIVEN BEFORE THE CONCLUSION OF THE GAME, PEOPLE START SCURRYING AROUND TRYING TO MAKE THAT LAST TRANSACTION.)

(THE GASOLINE SITUATION CAN BE DISCUSSED AS A PRELUDE TO A LATER ARTICLE WHERE THE USE OF THE MARKET WILL BE CONSIDERED AS ONE SOLUTION TO THE ENERGY CRUNCH. THE BASIC POINT TO DEVELOP AT THIS TIME WOULD BE SHORTAGES EXIST WHERE A NEW POINT OF EQUILIBRIUM CANNOT BE ATTAINED.)

Student Activities

Teacher Notes

In the game you have just completed there were 39 buy orders and 39 sell orders, three orders for each of the prices indicated below:

Price	Buyers (not more than)	Sellers (not less than)
\$70	3	3
65	3	3
60	3	3
55	3	3
50	3	3
45	3	3
40	3	3
35	3	3
30	3	3
25	3	3
20	3	3
15	3	3
10	3	3

Translate these data into supply and demand schedules in the table below:

Price	Demand (amount people would be willing to buy)	Supply (amount people would be willing to sell)
\$70	(3)	
65	(6)	
60	(9)	
55	(12)	
50	(15)	
45	(18)	
40	(21)	(21)
35	(24)	(18)
30	(27)	(15)
25	(30)	(12)
20	(33)	(9)
15	(36)	(6)
10	(39)	(3)

1. Where would you expect the equilibrium price of firewood to be considering the above prices?
2. Considering the prices and number of sales copied from the chalkboard, how did the price in your firewood market compare with the above expected equilibrium price?
3. How do you explain the similarity or difference?
4. As the game progressed, what tended to happen to the selling price?

WOODEN REACTION

... Search for fireplace logs heats up.

By Stan Federman
FROM PORTLAND, ORE.

Here in Oregon a wood panic is in full swing.

Amid headlines about incipient fuel shortages and amid record low temperatures in the first week of November, Oregonians have cleaned out most firewood dealers, and many households are themselves lumbering the forests—sometimes illegally.

Albina Fuel Co., a major Portland-area fuel supplier, has stopped taking any more firewood orders. "We've sold more of it in the last two months than we did all last year," says Clifford Arnston, the firm's owner.

Other Portland fuel firms also report short supplies, high prices (\$37 a cord for slab wood, almost double last year's figure), and the possibility there won't be any firewood available by Christmas.

"It's panicville," says one local dealer. "Hell, I don't even answer the phones any more. I ran out of wood two weeks ago."

The same kind of concern is sweeping Americans in many other states too. In Washington, D.C., Forest Service officials said numbers of requests for wood-cutting permits are up substantially in many of the nation's 155 national forests. Sales of wood-burning stoves are up sharply too in some areas.

In Oregon, Mount Hood National Forest officials report that they are issuing wood-cutting permits "like they're going out of

style." Foresters in other national forests in the state say firewood-cutting activity is almost 10 times normal.

"Taking more than their share of the right kinds of wood is really a problem," says Joseph Astleford, timber-management assistant at the ZigZag Ranger Station. The

Energy Crunch

station, in the heart of Mount Hood National Forest, has been swamped with requests for wood-cutting permits. But he adds that just as many people ignore the law, simply go into the forest, and chop down their firewood anyplace they can find it.

Forest Service permits allow people to cut 20 cords of fallen wood. The permits are usually offered in areas that have been logged over and where the Forest Service would have to burn the fallen timber were it not given away.

"The problem for us," says Astleford, "is that people are coming back into the woods three and four times for wood. Normally, an average pickup load, which is a third of what their permit allows them, has been sufficient for people in the past. No more. Now they not only take out the full 20 cords—but often a lot more. Too much more."

At road blocks, foresters, state police, and the Clackamas County sheriff also have caught many people absconding with such wood as cedar, which is too valuable for the Forest Service to issue cutting permits for.

The National Observer, 12-1-73

So What's Valuable

Teacher Notes

Objective, Concepts and Procedures

OBJECTIVE:

The student will be able to utilize the concepts learned in previous lessons in supply and demand and transfer the analysis of a new situation.

CONCEPTS:

Supply, Demand, Price, SUBSTITUTION

PROCEDURES:

This lesson is designed to develop the idea that price is indicative of the value consumers place on a given product. It is also designed to act as a review of the concepts the students should have acquired in previous lessons.

The lesson utilizes a cloze procedure which is a reading comprehension exercise. In the student's booklet key words, or concepts, have been left out. After reading the article on scrap values the student is to complete the section which follows. This may be done at home or in class. Different terms may be used in place of the ones given. Class discussion may follow as a way of helping students who had difficulty in completing the exercise.

Cash for Trash

As Scrap Values Soar, All Sorts Of People Start Collecting and Selling What Used to Be Garbage

By BILL HIERONYMUS

Staff Reporter of THE WALL STREET JOURNAL

One day last fall, handyman Robert Cockerl was driving through a residential neighborhood in Hempstead, N.Y., when he spied some old newspapers tied in bundles and sitting on a curb. "I saw the newspapers out there and thought that I'd pick them up to earn a little extra money," Mr. Cockerl says.

So he picked up the newspapers. And then Mr. Cockerl was picked up—by the police.

Mr. Cockerl says he didn't know it, but a week before his arrest the town of Hempstead on Long Island began enforcing an ordinance making any newspapers left along the curbside town property. It seems both the town and Mr. Cockerl had the same idea; to earn some cash by selling some trash.

A year ago, scavengers like Mr. Cockerl would hardly have faced this kind of competition from the authorities. In the last few months, however, the price of wastepaper has risen so high that yesterday's headlines are suddenly worth fighting over. Prices of scrap metal are also leaping to new heights. The result is that a horde of would-be junkmen—from private citizens, to big companies, to local governments is invading the garbage market.

"It isn't charity or ecology any more," says Art Vasquez, a waste paper dealer in Glendale, Calif. "It's money."

Reasons for the surging prices boil down to plain supply and demand. Last summer, strikes closed Canadian newsprint mills, and many newspapers are still printing slimmer editions because of those labor troubles. That means their readers don't have as much to throw out, which means there is a shortage of old newspapers. Demand for scrap metal, especially steel, is up because production is booming. And increasing exports of both paper and metal don't help matters at home. (Garden State Paper, the country's biggest newsprint recycler, says its supplies are being "raided" by Asian dealers. Its inventories are down to just 2,000 tons from a normal level of 30,000 tons.)

The number of people willing to part with their garbage for nothing seems to be getting lower as the prices get higher. Explorer Post

747 in Berea, Ohio, for example, was collecting 150,000 pounds of paper for recycling during the winter months until prices jumped. Now the post is averaging 100,000 pounds of paper. And to get it, say adviser LaMar Williams, "we have to work harder."

Even some community-spirited recyclers are taking note of the profit potential. Art Vasquez says collection drives bringing paper to his AAA Paper Stock Corp. used to be pushed mostly by charities and environmentalists. Lately, he says, some of the same people are coming in "selling for their own pocketbooks."

Individuals who aren't doing too well in their own work are finding that garbage offers a fresh allure. Lawrence I. Holtzworth, a Burbank, Calif., aerospace engineer who is about to be laid off by Lockheed Aircraft is hoping to stay financially afloat by collecting waste paper. He has already tried the water and found he can gross \$150 working by himself on weekends. "I figure I can do okay when I go into it full-time," he says.

The housing business was going soft for John R. Riley, a prosperous contractor in Rittman, Ohio, a farming and factory town near Akron. So Mr. Riley tried branching out into the waste paper line. He is selling at fancy prices to nearby Packaging Corp. of America, a container maker. And while his housing interests continue to lose steam, Mr. Riley says, his paper business "has been growing from one day to the next."

Companies also are beginning to see a profit in the paper they've been tossing out. "I'm getting calls every day from big companies that want to know how to prepare their paper for sale," says Maurice Weiskopf, a paper dealer in Cleveland. Adds Clement Cody, owner of a Cleveland distributor of paper balers and compactors: "It's a sellers' market. I could ship 50 of these machines a day or more, if I could get them myself."

(Some concerns are feeling pressure to retrieve waste paper from their packaging suppliers, who would like to increase supplies and lower prices. "The paper companies are implying in a nice way that if we don't save our waste paper, we aren't going to be able to get paper from them," says D. L. Phillips, a purchaser at Owens-Corning Fiberglas Corp.'s fa-

cility in Newark, Ohio. The plant recently ordered a machine to bale wastepaper.)

Local governments are cashing in on high scrap prices, too. The sale of their most abundant civic product—garbage—is enriching their coffers and also helping to preserve shrinking landfill space. The Environmental Protection Agency's Resource Recovery Division says 75 cities are in one way or another deriving some revenue from other citizens discarded newspapers. Less than two years ago, the agency says, only three cities had similar programs.

"We're talking about adding \$150,000 annually to San Diego's revenues," says Terry Flynn, public works director for the city. In January, San Diego adopted a program, similar to others around the country, that requires private paper dealers to bid for the right to collect newspaper from residential neighborhoods. The city, meanwhile, is urging people to bundle up their papers for the pickups.

In St. Louis, the high price of scrap metal has turned towing abandoned cars to the junkyard from a sanitation chore into a profitable enterprise. A towing company is paying the

city for the privilege of carting off the wrecks. "We've made \$50,000 from the cars we've had picked up since September," says Walter Abell, an assistant to the director of street operations.

Cities and localities do have a problem, though, with scavengers and vandals who break laws to get at the junk before the government does, or who just steal things that aren't junk at all to sell as scrap. Half of the abandoned cars in St. Louis are being snatched up by scavengers in violation of a local law similar to the one in Hempstead that bars people from taking bundled newspapers. In Cleveland, there has been a spate of missing manhole covers since a local newscaster mentioned that they could bring \$5 each as scrap.

Rural areas aren't immune either. One night recently, somebody cut down copper wires from the utility poles that run through farmer Stirton Oman Sr.'s pasture near Brentwood, Tenn. The copper thief knocked down some live wires in the process, and some of Mr. Oman's cattle wandered over to sniff the downed lines. Nineteen of the animals were electrocuted.

The Wall Street Journal, 1-31-74

Reading on Scrap Values

One of the things the market system does is determine how much something is WORTH. What will people pay for something? In the article you read where a paper dealer refers to waste paper as MONEY he really didn't mean that you could spend it. He meant that waste paper has become so valuable that people will pay (or exchange) money for it.

The reason for this increase in value is the relationship between supply and DEMAND. As mentioned in the reading, people just don't have as much paper. The problem is that your local newspaper has probably been getting thinner in the past year or so and this means you have less of it to throw away.

When the supply of old newspapers was large the demand seemed low in relation to this supply. Waste paper was cheap and it was called junk. Now that the supply of old waste paper is LOW (and demand is increasing) the price RISES and we think of it as being valuable.

An interesting point is that communities and companies that never paid much attention to what they threw away are now concerned about saving waste paper and other things.

The article you just read also talks about junk cars and how the price of scrap metal has gone up. It used to be that no one was interested in abandoned cars but now that the price of scrap metal is higher people now have incentive to salvage old cars.

One lesson we might learn from all of this is that low prices encourage waste. If paper, and scrap metal, have low prices then few people are very concerned about wasting them. If the cost of these products increases, people would be less likely to waste things.

The point is that it is how much people are willing to pay for something that determines how VALUABLE it is. If there is only a limited supply of something and a lot of people want it then it will cost a lot and people will call it valuable. If no one wants it, it may DECREASE in value. The price of an item would INCREASE if supply remained the same, but may not change if supply increased.

The article you read mentioned junk cars. When scrap metal prices were LOW the cars would just lie in the street

where people abandoned them. The sanitation department picked them up just because it was their job. Now the price people are willing to pay for scrap metal has gone UP. As a result people will pay the city for the privilege of collecting the junk cars. In fact in one city it is against the law to pick up junk cars without city approval. This junk has become so VALUABLE that people are willing to break the law to get it. The demand has increased while the supply has probably remained CONSTANT. Consider how other items which litter the street might be corrected.

As you think back through the lessons in this booklet remember what you learned about the interaction of buyers and sellers. This interchange is what determines the price at which something is sold. You can sell something for what someone is willing to pay for it. If there is only a little bit around, and a lot of people want it, then you can get a HIGHER price. This works with almost anything whether it is junk cars, eggs, or even illegal drugs.

The Egg Problem

Teacher Notes

Objective, Concepts and Procedures

OBJECTIVE:

The student will be able to demonstrate, by giving examples, how advertising can be used to increase the demand for a product.

CONCEPTS:

Demand, Supply, Price.

PROCEDURES:

The student should be asked to carefully read the article on the egg producers. The first task of the students is to determine exactly what the producers are attempting to do. (Increase the demand for eggs with an advertising campaign.)

Advertising Campaign

The reason for this advertising campaign can be examined by looking at what has happened to the demand for eggs. (1972 consumption was down 27% from 1945.)

Using what they have learned from previous lessons, the students should hypothesize what will happen if supply remains constant and demand lessens (prices will fall). They should also hypothesize what will happen if demand falls and production decreases. (Prices and quantities supplied would decrease.)

What the students are examining at this point is the affect on the market system of an advertising campaign. To assist students to understand the impact of advertising, you

Teacher Notes

might ask them to think of other products which are subjects of similar advertising campaigns. (Two examples might be large cars produced by Detroit and cigarettes.)

At this point the class should be split into several groups and each group given a product for which the producer is interested in increasing the demand, through an advertising campaign. The assumption is that the supply is being held constant, hence the price will either stay at its present level, move down, or move upwards if the campaign is successful. The products may be the choice of the individual groups or they may select from a list the teacher gives them.

An additional question might be raised after the various groups present their advertising campaigns. Namely, does advertising (if effective) allow for the proper, or best, allocation of resources? This is an extremely complex question and it is not expected that it will be fully resolved. Rather the idea here is that some classes may wish to consider it. If your class wishes to consider it you should ask the students to cite specific examples to back up their generalizations.

Evaluation

The teacher might cut several advertisements from either newspapers or magazines and ask the class how each one is attempting to increase demand for their product.

Another thing that might be tried is to ask the students to classify the products into those things which are necessary for people and those things which are really not necessary but which advertising is attempting to convince us that they are really necessary. The point here is to examine how advertisements can, if done properly, modify demand. Indeed, if the teacher wishes, this lesson can be expanded into an examination of the social benefits or problems of product advertising.

Commodities

Egg Producers Are Raising Funds to Combat Sagging Demand and the 'Cholesterol Scare'

By EUGENE SORRELLS

Staff Reporter of THE WALL STREET JOURNAL

CHICAGO—Any egg jokes comedian George Gobel serves up at the egg industry's "million dollar banquet" in Atlanta tonight might be taken with a grain of salt. Producers are increasingly sensitive about the subject, it seems, as they face a continuing decline in demand for their product.

That's why egg producers from all over the country are shelling out \$2,500 a plate for tonight's affair. The drop in egg consumption has reached the crisis point, producers say, and they're hoping to raise \$1 million tonight to be used this year to try to reverse the slide. If this and other fund-raising activities succeed, the producers say, they will have at least \$3 million to spend this year to defend the egg.

Recent Agriculture Department statistics bear out the industry's plight. Last year, U.S. egg consumption fell to an estimated 292 a person, a drop of 5% from 1972 and the lowest per-capita consumption since 1936. Last year's rate was 27% below the record 403 eggs per capita consumed in 1945.

Americans are buying fewer eggs partly because of changed eating habits. They are skipping or scrimping at breakfast, a traditionally egg-oriented meal. But the decline steepened in the late 1960s as publicity linked cholesterol, contained in eggs and other foods, to heart disease. Last year's drop also was due in part to cutbacks by egg farmers whose prices were indirectly frozen by price controls last summer. The industry, however, regards the "cholesterol scare" as its greatest threat.

To be sure, the industry has other problems, one of which may soon be in evidence again. That's the overproduction that invariably follows high egg prices. Large white eggs are selling for 76 cents a dozen wholesale in New York, up from 52 cents a year ago. Depending

on their efficiency, producers are making a profit of between 12 and 20 cents a dozen, industry analysts estimate. Farmer's receipts jumped to nearly \$3 billion in 1973 from \$1.8 billion in 1972.

Profits like these are encouraging egg farmers to increase their laying flocks. This along with the normal spring rise in production, could cause prices to fall as much as 25 cents a dozen by May, one observer says. If that happens, the present handsome profits will be wiped out, and industry leaders again may begin recommending stern measures, such as mandatory flock culling, to trim output. Such pleas for unified action have met with only mixed success in the past.

But nothing has unified egg producers as the prolonged consumption slide has and, in particular, the cholesterol issue. "I think they realize they're battling for their economic lives," says one observer.

The industry will fight back with a massive promotion campaign aimed at polishing the egg's image. The sales pitch will attempt to mollify consumers' fears about cholesterol in eggs, and will also stress the product's nutrition and economy, says Gene C. Masters, an official of United Egg Producers, a big Atlanta-based cooperative. "Maybe in the next five to 10 years we can slow the downward trend in consumption and possibly turn it around," Mr. Masters says.

The publicity campaign already has started with a series of newspaper advertisements, one of which features "the 'sexy' egg," by noting that "cholesterol is the building block of sex hormones." The industry also is distributing free information booklets designed, among other things, "to disprove the myth that limiting egg consumption can reduce the risk of heart disease."

The Wall Street Journal, 1-28-74

Getting Enough Gasoline

Teacher Notes

Objective, Concepts and Procedures

OBJECTIVE:

The student will consider two possible solutions to the energy crisis.

CONCEPTS:

Market, supply, demand, market price, profits.

PROCEDURES:

The past meat shortage along with the present energy problem have presented many problems that Americans have not confronted before other than in times of national emergency. The impact of the meat shortage in 1973 on the consumer was not as critical because people could substitute other food products, but the gasoline shortage of 1974 was not as easily remedied. People became increasingly frustrated as gas supplies ran low. A station suddenly running out of gas may have resulted in long lines of thirsty cars with angry drivers all nervously awaiting a drop of gasoline. What does all this mean? Has our system gone haywire? Are people in the U.S. no longer capable to make the adjustments to reduce demand or increase supply to correct the shortage dilemma?

No one has the answers, but two summary positions that appeared in *The Wall Street Journal* may provide some information regarding alternatives open to policy makers. The material presented in the articles represent two basic positions:

1. Market Position, "A Bizarre Solution," *Wall Street Journal* 11-14-73.
2. Rationing Position, "The Case for Gasoline Rationing," Walter Heller, *Wall Street Journal* 12-21-73.

A Bizarre Solution

The good chance that Mr. Nixon's voluntary conservation program won't save enough energy to get through the winter has some of his advisers frantically searching for a solution.

Some in the White House favor rationing, and warn that it may be here by January 1. Others, who recognize that peacetime rationing would turn into a catastrophic mess, prefer to slap on a federal surtax to drive up the price of fuel and cut into demand.

While intriguing, this approach has some problems of its own. First, nobody knows exactly what the surtax should be. If it's too small, it won't do the job. If it's too big, it would not only incite general inflation, but also disrupt general patterns of commerce beyond need. John Love's offhand guess that 30 cents a gallon would do the trick stands a 99.9% chance of being wrong on the high or low side.

Additionally, there is the revenue problem. A penny-a-gallon surtax yields roughly \$1 billion in federal revenue. A 30-cent surtax would yield something less than \$30 billion. Clearly, the government can't take that much money out of the economy without sending it into a tailspin. Siphoning even \$10 billion out of the economy with a dime surtax would spell certain recession for 1974.

Congress could get this cash into the mainstream by raising Social Security benefits again, which, after all have only been boosted 50% in the last three years. But a more prudent allocation would be to provide these surplus funds to the problem at hand. Use, say, half the money to build mass transit, bail out the bankrupt railroads, etc. And give the other half to the oil companies on the understanding that the companies will develop new energy sources, build new refinery capacity, and step up costly exploration proj-

ects. This approach has a certain clumsiness that gives us pause.

So there's reason to look at the absolutely bizarre scheme designed by Milton Friedman, the well-known economist. Mr. Friedman suggests what appears to be a simple, flawless plan that for some reason has not occurred to anyone in Washington. He thinks the government should let the price of fuel rise until the marketplace figures out, to the tenth of a penny, exactly where supply meets demand.

The oil companies would indeed make big profits, which would mean they would have no reason to come to government for the capital they require for developing new energy sources, building new refinery capacity, and stepping up costly exploration. In fact, Congress could wipe the oil-depletion allowance from the books. Profit pure and simple would be incentive enough to get the petroleum industry racing every which way to find oil. If Congress, in its wisdom, also decontrolled natural gas prices, it would have to jump out of the way or be trampled by the competitive forces it would unleash.

It should not be forgotten that the Friedman plan would not only put profit in industry's pocket. Half of the increased revenues would be paid to the Treasury in the form of corporate income taxes. Congress would not have to pass a surtax to get new money for mass transit, bailing out the bankrupt railroads, etc. The oil companies will be happy to collect this money and turn it over to the government.

Granted it's a radical plan. But it appears so straightforward and simple compared to the alternatives there's no reason it should not be at least considered. It could be just the thing. The American economy is so resilient, so flexible that we believe it might even adjust to a free-market system, bizarre as that might seem.

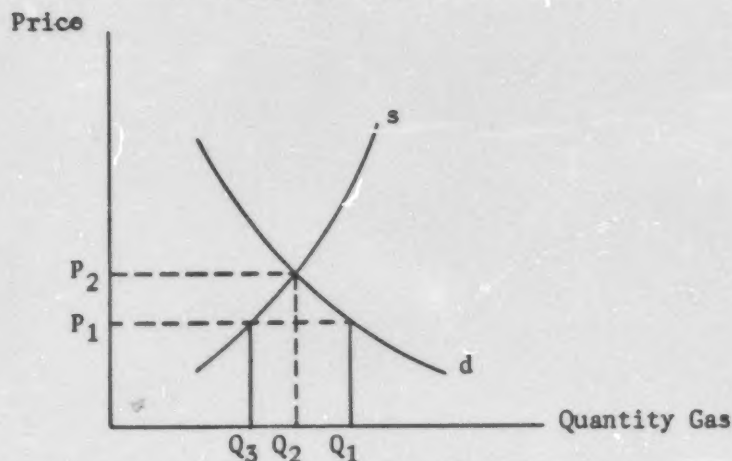
The Wall Street Journal, 11-14-73

In the first article "A Bizarre Solution," a case for the market is presented in an editorial representing the views of Milton Friedman. Within the second article, Walter Heller, a former chairman of the Council of Economic Advisors, suggests that using the price system to correct the present gasoline problem would cause too many other problems, thus he recommends moving to a formal rationing system.

How to use these articles depends on the individual needs of each class; it could be used as the basis of a two day discussion lesson or could be worked into a classroom debate where the pros and cons of each position could be debated and the class could then decide on what policy recommendations they would make for the future. Or each of the lessons could be used separately. We will leave the sequence up to you. The thing to remember is that each of the articles suggests a different solution to the same problem.

Questions You Might Have Your Students Consider

1. In considering the present gasoline situation, what is the basic problem? (*A SHORTAGE WHERE THE QUANTITY OF GASOLINE DEMANDED IS GREATER THAN THE QUANTITY SUPPLIED. IF THE MARKET WAS LEFT TO FREELY MOVE, THE NEW EQUILIBRIUM WOULD MOVE TO P₂, BUT UNDER PRESENT GOVERNMENTAL POLICY IS MAINTAINED AT P₁.)*)



2. Friedman suggests letting the price rise until the market-place figures it out, what does he mean? (*LET THE MARKET, I.E. SUPPLY AND DEMAND, INTERACT TO WHERE THE PRICE WOULD BE DETERMINED BY THE MARKET RATHER THAN GOVERNMENT CONTROLS.*)

Teacher Notes

3. Since demand has been increasing at 6-7% annually, if the market situation prevails the prices would rise, thus increasing oil company profits. The question to be raised—are profits necessary in the market system? Consider benefits and problems. How can increasing profits be beneficial beyond oil companies?
 - (a) *(INCREASE EXPENDITURES TOWARD MORE OIL REFINERIES, MORE EXPLORATION WHICH WOULD ULTIMATELY INCREASE THE SUPPLY OF OIL.)*
 - (b) *(INCREASED REVENUE TO THE GOVERNMENT THROUGH CORPORATE INCOME TAXES.)*
 - (c) *(THE ADDITIONAL REVENUES FROM TAXATION COULD BE USED FOR MANY SOCIALLY DESIRABLE PROJECTS, SUCH AS RAILROADS OR OTHER FORMS OF MASS TRANSIT.)*
4. How can increasing profits to oil producers create problems? *(SOME CONSUMER ADVOCATES SUGGEST SUPPLY IS BEING HELD BACK BY THE OIL COMPANIES, THUS ALLOWING PRICE TO CREEP UPWARD AND AS A RESULT INCREASING PROFITS AT THE EXPENSE OF THE CONSUMER.)*

In Summary

You might wish to have the students consider the following effects if the market operates without government interference when demand increases:

1. *THE PRICE OF GASOLINE GOES UP*
2. *PROFITS RISE PROVIDING INCENTIVES FOR GREATER FUTURE PRODUCTION*
3. *INCREASING SUPPLY IN THE FUTURE MAY LOWER THE PRICE IN A FEW YEARS*

Class Discussion Format

After the students have considered the questions above you should then raise the problem of what happens to the poor if this free market system prevails as a solution to gasoline shortages. Some students may suggest that rationing by the price system hurts the poor and favors the rich. The rich can afford to pay the high prices, the poor may have to go without gas.

Milton Friedman suggests:

Teacher Notes

"What of the poor man with his old jalopy as the only way to get to work? The answer is straight forward. If high oil prices impose special problems on some, let us provide funds to mitigate their problem. Let us not impose compulsion and waste on 95% to avoid special measures for 5%." (p. 130 *NEWSWEEK*, November 19, 1973.)

You might wish to break the class into four groups in order to consider the public policy questions involved in a free market solution to the gasoline shortage. That is, will the poor suffer as a result of this policy and if so is this desirable.—Desirable both in terms of economic stability (Price and output stability over time) and in terms of social and economic justice (effect on people in different income groups and needs for transportation).

The Case for Rationing

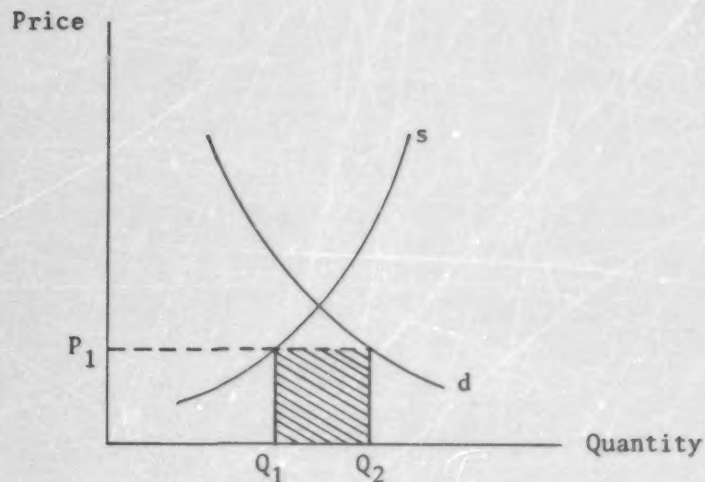
Teacher Notes

Introduction

After the students have considered the Friedman position you may wish to introduce them to the arguments in favor of rationing, as presented by Walter Heller.

If the price system is allowed to work in a free market, the quantity demanded will equal the quantity supplied at the equilibrium price. Some economists call that particular function of prices, "the rationing function." Equilibrium price takes what is supplied and divides the quantity among the demanders that want the product at that price and higher prices.

When price is below equilibrium, there must be other ways to decide "who gets" what is supplied. This is the case of excess demand or shortages illustrated in the following diagram:



The shaded area represents the shortage. At p_1 , q_1 will be available but q_2 will be wanted. Since prices are not allowed to move to equilibrium there must be some other way of distributing q_1 among all the demanders q_2 .

"The Case for Gasoline Rationing"

By WALTER W. HELLER

The current debate over gasoline rationing versus huge price or tax increases is beclouded by neglect of one simple fact: that the price increases required to match supply and demand in the short run are vastly greater than those required to do the job in the long run.

In the short run—say, in a few months to a year or so—even vast price run-ups won't suck a great deal more oil out of the earth. But estimates by Houghakker and Verleger suggest that "the long-run elasticity of supply of petroleum may be as high as 1.0." That is, a 10% rise in price would lead to a 10% increase in domestic output.

Similarly, on the demand side, studies indicate that, in the short run, a price rise of 10% would cut gasoline demand about 2% to 2.5%. But in the long run—that is, after an adjustment period of two or three years—the estimated cutback would be about three times as large. The inference is clear: to cope with today's Arab oil crisis, a huge price jump would be needed. To cope with our chronic energy problem calls for a much more modest rise.

How to bridge the gap? Gasoline rationing is the instrument of choice for the transition. Even with its well-known defects, its advantages over massive price increases for the short run seem compelling. If we simply let prices run to the heights that will clear today's market, they will not only rise far above the long-run equilibrium level, but generate unconscionable profits—in the tens of billions of dollars—for the petroleum industry.

The price solution does not avoid the disruptive effects of skyrocketing prices today and skidding prices after the transition.

The all-out price solution, would sharply increase the risks of putting the price-wage spiral back into orbit.

In other words, if we are seeking reasonable certainty—a commodity in considerably shorter supply today than gasoline—rationing is the way to get it: certainty for the government in achieving the desired cutback in gasoline use and certainty for the consumer in getting a basic allotment of gasoline without paying ransom.

In addition, if we adopt a simple and swift rationing system, using either negotiable coupons or a basic ration plus coupons auctioned by the government, the level of the auction price could tell us a lot about the changing degree of supply-demand imbalance. As the price drops, it would give us automatic signals for the phase-out of rationing.

As a transitional device, then, rationing wins out on its merits over the alternatives of savage price or tax increases. What makes the case well nigh conclusive are three interrelated political facts of life:

—the Public preference for rationing is overwhelming. The Harris Poll shows a 71-21 acceptance ratio for rationing and a 78-17 rejection ratio for gasoline tax increases.

—Speed is of the essence, and power to ration is about to be put into the President's hands. A simplified coupon system could go into effect in weeks.

But how do we answer if Simon says, implicitly or explicitly, "Who needs it?" Who needs rationing when rising prices, voluntary and compulsory curbs on petroleum use, and a toughened system of allocations and guided price changes are already working to balance supply and demand?

Broadly, the answer is that the policy to date runs enormous risks of failing to suppress wasteful and nonessential uses of energy enough to safeguard the vital uses that nourish employment, production and income.

The Wall Street Journal 12-21-73
(Modified for Materials)

This is the gasoline situation that this article discusses. The author argues that in the short-run (less than a year), the demand and supply curves are fairly stationary. Thus it would take a large price increase to enable the market to reach equilibrium. But in a few years people may learn to use less gasoline—take mass transit, form car pools, make weekly shopping trips, etc., and that supply will be able to increase a great deal—build new refineries, new firms start to produce gasoline, and new sources of gasoline can be discovered.

During the transition period to a modified free market the author suggests that we should create a system which will divide the existing supplies among all the people who want the gas at current prices. One of the systems proposed is to take the total supply of gasoline and divide that by the number of licensed drivers. Then you have an average quantity of gasoline per driver. The next step would be to distribute an equal number of coupons to all the drivers. In order to purchase gasoline a driver would have to pay the appropriate price PLUS give a coupon.

Questions You Might Have Your Students Consider

1. What would drivers do if they didn't need all of their ration coupons? (*THEY PROBABLY WOULD SELL THEM, EITHER TO OTHER DRIVERS WHO NEEDED MORE THAN THEY WERE GIVEN: OR A MARKET MIGHT DEVELOP FOR THE COUPONS THROUGH GAS STATIONS.*)
2. List some other ways that demand for gasoline could shift in the long-run. (*PEOPLE COULD TRADE IN THEIR LARGE CARS IN FAVOR OF SMALLER ONES. PEOPLE COULD WALK AND RIDE BICYCLES WHEN THEY MADE SHORTER TRIPS. OTHER SOURCES OF ENERGY COULD BE DEVELOPED, E.G., SOLAR.*)
3. List some other ways that the supply of gasoline could increase in the long run. (*THE ALASKAN PIPE LINE AND THE BRITISH NORTH SEA OIL COULD BE DEVELOPED. OFF SHORE OIL AND SHALE FIELDS CAN BE EXPLORED.*)
4. Are lines waiting for gas at service stations indicative of demand? (*THEY CAN BE, BUT THEY CAN ALSO BE THE RESULT OF FEAR OF FUTURE SHORTAGES; OR THE NON-DELIVERANCE OF EXISTING SUPPLIES IN ANTICIPATION OF PRICE INCREASES.*)

Teacher Notes

5. If the price was allowed to reach equilibrium would the profits of the oil companies be excessive?

(THIS IS A HARD QUESTION TO ANSWER. THE ECONOMIC FUNCTIONS THAT PROFITS SERVE ARE TO ENCOURAGE MORE FIRMS TO ENTER THAT FIELD OF PRODUCTION, AND TO MAKE IT MORE DESIRABLE FOR OLD FIRMS TO INCREASE THEIR OUTPUT OF THAT PRODUCT. THE WORD "EXCESSIVE" MAY MEAN ABOVE THE PRICE NECESSARY TO SOLICIT ADDITIONAL OUTPUT.)

6. Why does the population prefer rationing to other short-term solutions? (THIS IS AN OPEN-ENDED QUESTION. ONE POSSIBLE ANSWER IS THAT PEOPLE WANT A SOLUTION, AND THIS IS ONE THAT THEY UNDERSTAND AND FEEL WILL HELP THEM; WHETHER OR NOT THIS IN FACT IS THE CASE.)

There are many articles on the same subject in current newspapers and magazines. Two other good examples are:

- (a) "Gas Rationing is No Panacea," Robert B. Stobaugh, *Wall Street Journal*, January 4, 1974.
- (b) "The Common Sense Way to More Oil," Gramm and Davison, *Wall Street Journal*, December 26, 1973.

Evaluation Exercise

Ticket fever is an annual bug that infects many loyal fans as their teams prepare for playoff games. The problem, in most cases, is many loyal supporters will be left to their reliable radios as they attempt to keep up with the resulting fate of their team.

New York City is one of the many metropolitan areas beginning to face the problems of loyal Knick and Ranger fans. Madison Square Garden, the major arena for indoor sports, holds 19,694 fans for basketball. Of these available seats, 13,600 are first made available to the ticketholders. In addition, 2,500 seats at playoff time are set aside for the high and mighty, visiting teams, the league, and the news media. This leaves approximately 3,500 tickets for public sale.

Assume you are president of Madison Square Garden and you are attempting to determine how to allocate the 3,500 tickets that are available to the general public. In making your decision you are aware of a covey of professional

scalpers who stand outside the Garden hawking \$13.50 tickets for \$50 to \$60.

Teacher Notes

In the past scalpers have been arrested and charged with criminal trespass, a misdemeanor which goes on a police record. However, this policy has not eliminated scalping.

The problem, facing you as manager of Madison Square Garden, is how to fairly allocate the remaining 3,500 tickets to the thousands who are clamoring to obtain tickets.

(HINT FOR THE TEACHER: THE OBJECTIVE OF THIS EXERCISE IS TO PLACE THE STUDENT IN A SITUATION WHERE A SHORTAGE EXISTS AND THEN EXPLORE THE CONSEQUENCES OF DIFFERENT STRATEGIES SUGGESTED TO RESOLVE A SITUATION.)

Questions You Might Have Your Students Consider in the Ticket Scalping Exercise

1. Use supply and demand analysis to explain why scalping occurs.
2. If there is a shortage of tickets, what should the ticket officials do to eliminate the shortage? In considering your recommendation consider the advantages and disadvantages of each one.
3. If scalpers are able to sell tickets for \$50 to \$60, how could Madison Square Garden prevent scalping? Do you feel a law should be passed against scalping?

The Coming Crisis:

Teacher Notes

The Specter of World Famine

Objective, Concepts and Procedures

OBJECTIVE:

The student will be able to first identify some of the contributing causes related to the present food crisis. After discussing the problem, the student will consider the consequences of suggested alternative policies for future production and demand.

CONCEPTS:

Demand, supply, domestic market, world market and role of government.

PROCEDURES:

The student will first read the article and then use the information to spin-off into an historical examination of food production relative to demand and/or to consider policy alternatives for the future.

INTRODUCTION

One of the primary difficulties with social science education is the inability to examine present problems, to analyze them, and to project future implications. This complacency of mankind, especially in the western world, was most recently illustrated in the gasoline shortage of 1973-74. Warnings of future energy shortages were heard several years ago, but fell on deaf ears as we merrily moved ahead assuming our technology would solve all problems. Suddenly, the carefree world of cheap gasoline, heating oil and natural gas in the United States became a thing of the past. Although there appears to be a temporary respite with the problem of energy, the question must be raised, "Have we learned our lesson?"

Teacher Notes

Another crisis appearing on the horizon is a possible universal famine. Although there have been many doomsday prophets throughout the history of mankind, Reverend Thomas Malthus, a 19th century English economist, feared that the ever enlarging demands of growing numbers of mouths to feed could not be fulfilled with existing farming resources. Although, there are many present day prophets of doom, many of the more recent forecasters of pessimism are really reincarnations of the Thomas Robert Malthus speaking through a computer. The study, *Limits to Growth*, supported by the Club of Rome, is really an updated version of Malthus' earlier work. Even though the Reverend made many contributions to economics, he is primarily remembered today for his gloomy analysis of population trends. He contended in the absence of moral restraint, population will outstrip the available means of subsistence. The following article may provide some background information regarding our present food crisis.

Reflection Questions on the Reading

After reading the article, "The Next Crisis: Universal Famine," consider the world in two sections, the industrial and underdeveloped. Why have the underdeveloped countries continued to experience critical food shortages?

(POPULATION INCREASE, LACK OF CAPITAL, LIMITED EDUCATION, TRADITIONAL BELIEFS, LIMITED TECHNOLOGICAL KNOWLEDGE.)

With famines being predicted and actually occurring in different parts of Africa and Asia, what do you believe the future role of the United States should be regarding food production and distribution?

(OPEN ENDED QUESTION. THIS QUESTION COULD LEAD TO SELECTING SEGMENTS OF THE NEWS ARTICLE TO SUPPORT THEIR POSITION.)

Some Questions Related to the Reading

1. Although the U.S. has had large grain surpluses in the past, two reasons are given why the reserves have dwindled to nothing.

(A. GOVERNMENT NO LONGER SUPPORTS THE SOIL BANK PROGRAM, AND AS A RESULT, THERE IS LIMITED AVAILABLE LAND FOR INCREASED PRODUCTION IN THE SHORT RUN.

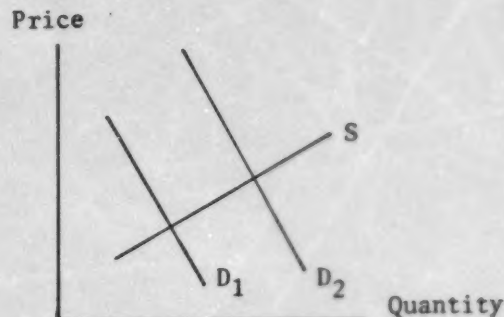
B. INCREASING PER CAPITA CONSUMPTION OF MEAT HAS INCREASED DEMAND FOR GRAIN FOR FEED, CAUSING SOME PEOPLE TO SUBSTITUTE GRAIN PRODUCTS IN PLACE OF HIGHER PRICED MEAT.)

2. Lester Brown, a former Agriculture Department official, states, "Americans might have to eat less meat a year from now or watch people starve to death on the TV news." What policies would you recommend to encourage Americans to consume less meat?

(MARKET, RATIONING SYSTEM, NO MEAT ON CERTAIN DAYS OF THE WEEK.)

3. After the Russian wheat deal several years ago, wheat prices tripled within a year. Why?

(INCREASE IN DEMAND WITH SUPPLY RELATIVELY FIXED IN THE SHORT RUN.)



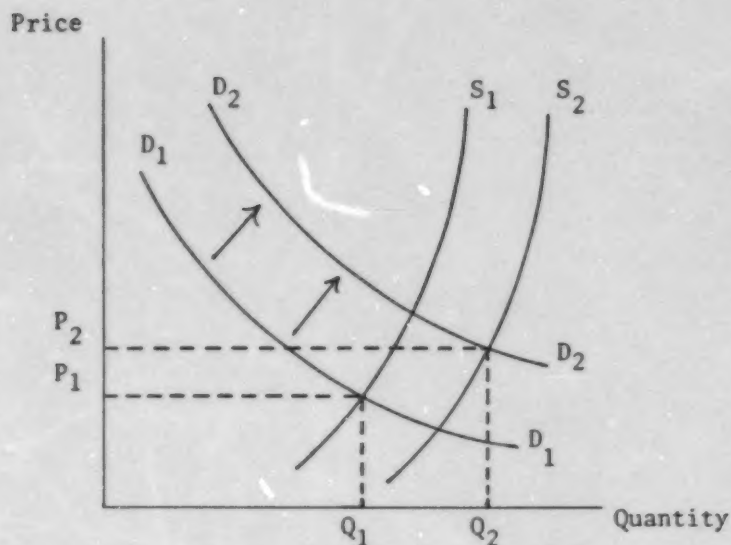
4. When considering the price of foodstuffs, where competition becomes increasingly intense, explain why the poor carry the heaviest burden.

(THE JAPANESE HAVE INCREASED THEIR DEMAND FOR U.S. BEEF—THE PRICE GOES UP. THE WEALTHIER MEMBERS OF SOCIETY CAN SUBSTITUTE, BUT THE POOR MAN CAN ONLY SUBSTITUTE BEANS FOR MORE BEANS AND PROBABLY END UP WITH LESS BECAUSE OF THE PRICE INCREASE.)

Teacher Notes

5. Prices have risen 9% for sirloin steak, 28% for hamburger, 103% for rice and 123% for beans over the last years. Why did prices progressively go upward with the less desirable foods?

(AS CONSUMERS CONTINUE TO SUBSTITUTE LOWER PRICED COMMODITIES, THE NUMBER OF BUYERS IN THE MARKET BECOMES LARGER CAUSING PRICES TO GO UP UNLESS SUPPLY CAN BE ENLARGED.)



(SHIFT IN DEMAND TO D_2 BECAUSE OF INCREASED NUMBER OF BUYERS; ALSO, THERE WOULD BE A SHIFT IN SUPPLY OVER TIME.)

To Guide Your Reading

1. Catastrophic
2. "Green Revolution"
3. Ranchos

The Next Crisis: Universal Famine

Glum Food Experts Fear Short U.S. Supplies, Global Starvation As Surpluses Dwindle, Prices Soar

A catastrophic world famine has suddenly become possible again. The prospect of widespread starvation has had more serious political and scientific attention in recent months than it has received in years. This time the doomsayers aren't just talking again about squalor in India, but also about shortages, high prices, and maybe even food rationing in the United States.

"The age of famine is already upon us," says James MacCracken, who directs the Church World Service and gets pessimistic feedback from many of the 40 countries where his private relief organization is trying to improve food and health conditions. "It is not unlikely that, about a year from now, political leaders may have to ask the American people to do the equivalent, in food, of turning down the thermostat several degrees," says Lester R. Brown, a former Agriculture Department official who had a reputation as a food supply optimist a few years ago.

"In any year from now forward, India and Bangladesh could lose as many as 100 million people to famine," says R. G. Anderson, a plant scientist. He helped create the "green revolution" in food-growing techniques that Brown and others hailed a short time ago as a way to stave off just such famines.

World food production has risen slightly faster than population over the last couple of decades, but the new concern is more than the traditional fear that birth rates will outstrip harvests. It stems from two major changes in the world's food supply and eating habits.

No More Surpluses

First, the enormous American agricultural surplus that used to prevent famines

elsewhere has entirely vanished. The last grains of wheat or oats or whatever were sold off from Government bins last summer. The 50 million acres of untilled American farmland that used to backstop that surplus have also evaporated. The Government no longer pays farmers to keep land idle, and most of that "extra" land is back in production.

Second, the rich nations' rising appetite for meat is pricing basic food supplies beyond the reach of poor people. Grain production has to grow much more rapidly than population now because rich nations buy up more and more to feed to pigs and cattle. "From some viewpoints you can look at the situation as the poor man's grain being siphoned off to feed the rich man's cow," says director Max Milner of the United Nations' Protein Advisory Group.

The U.S. Food Basket

"The parallels between the food situation and the energy situation are much closer than most people realize," says Nevin Scrimshaw, professor of nutrition at the Massachusetts Institute of Technology. A basic difference between the food and the oil shortages, however, is that Americans are the Arabs of the world food supply. The United States exports almost as much wheat and more corn and soybeans than all the rest of the world put together. It even exports more rice than any other nation.

"The choice that will come if there is a drought in North America," says Scrimshaw, "is whether you deliberately make a decision to let some countries starve or deliberately cut back on our use [of grain] to share it with the rest of the world." Even without a drought, says Brown, Americans might have to eat less meat a year from

now or "watch people starve to death on the TV news."

Competing for Grain

The world fell suddenly into this fix in 1972, when world-wide harvests declined for the first time since World War II. It was only a small decline, 3 or 4 per cent, but it was made worse as rich countries competed in the market place for grain to feed the animals to slake the nations' growing taste for meat. It takes about five times as much grain to produce a high-meat diet as one that relies mostly on cereals.

Thus the Soviet Union, which had always pulled in its consumers' belts to get through previous lean years, chose instead to follow other affluent countries and import grain to make up for its own poor harvest. The Soviets imported more food in 1973 than any country ever has in history. When the dust settled, the American surplus was gone and wheat prices had tripled to more than \$5 per bushel.

"Five-dollars-a-bushel wheat . . . over a long period of time does mean that really tens of millions of people are going to die an earlier death by malnutrition," said James P. Grant, president of the Overseas Development Council.

Last year was a bumper-crop year for most of the world, but growing populations and a growing taste for meat consumed the entire harvest. The price stayed high and again there was no surplus. The world's grain reserve continued to shrink. President John Knowles of the Rockefeller Foundation warned last month that projected 1974 reserves are enough to feed the world for only 20 days. Four years ago there was a 69-day supply. It has shrunk from 95 days in 1961.

Competition Creates Scarcity

For some people, then, diets have become worse in spite of the bumper 1973 harvest. And for the first time, Americans are forced to compete with foreigners for scarce food.

Thus the Russian wheat purchases drove world prices up far above what the hungry masses in India can afford. But they also drove up the price in the United States and made wheat so scarce that American bakers say we may have a temporary bread shortage this summer. And thus wealthy Japanese can compete with ordinary Americans for scarce meat, paying \$5.35 per pound in Tokyo butcher shops for U.S.-raised rib-eye steak, while the Americans who packaged it eat hamburger.

The Americans in turn compete with poorer Guatemalans for beef raised on their ranchos. Scrimshaw says beef production is increasing in Central America, but beef eating is declining there because American consumers outbid the natives.

This price competition falls heavily on the poor, in this country as well as overseas. The wealthy can compete for the poor man's food; the poor man cannot compete at all.

Pressures on the Poor

Thus a steak-eating American who is put off by last year's 9 per cent rise in the price of sirloin can still step down to hot dogs and hamburgers. But people who were already eating hot dogs and hamburgers face price increases of 34 and 28 per cent, respectively, for these kinds of meat. If they step down to a poor man's diet of rice and beans they put unbearable pressure on people who already had to depend on those foods. The price of rice rose 102 per cent last year; beans went up 123 per cent.

"I hazard the guess that most of that malnutrition was due to ignorance rather than economics," Milner says of the 1960's discovery that many Americans were undernourished in a land of plenty. "There were low-cost sources of food if poor people knew how to use and prepare them."

"But now I think we have reached a point where [American] poor people, even if they understand how to buy nutritious foods at the lowest prices, are still going to be in difficulty."

Indeed, after eating more and more beef for decades, the average American cut his beef consumption last year to 109 pounds from 116 in 1972. His ration of pork fell to 61.5 pounds from 67.

Against this background of high prices, short supplies, and the evaporation of surplus Government food stocks, the prospect of even a minor crop failure scares the daylight out of politicians and food experts.

"For the next year or so we'll be skating on very thin ice," says Ambassador Edwin Martin, who is coordinating the American position for a world food conference the United Nations has called for November at the suggestion of Henry Kissinger. "It isn't a sure thing that there will be a crisis in the fall, but we'll have to have a lot of things going for us to avoid one."

But the energy crisis means we won't have everything going for us. Fertilizer prices have doubled or tripled in the past year or so. The governor of Nebraska says there is a 15 to 23 per cent shortage in his state. The expected shortage of fertilizer in India this year may be deep enough to slash food supplies by the amount needed to feed 25 million people. Even if India had enough fertilizer and good weather, this year's crop is only expected to match that of 1971, when India had 40 million fewer mouths to feed.

The National Observer, 3-30-74
(Modified for Materials)

Evaluation

Assume you are a policy maker for the U.S. Department of Agriculture. What recommendations would you make regarding future distribution of U.S. produced agricultural products if there was a famine affecting millions of people?

(THIS COULD BECOME A CLASS DISCUSSION EXERCISE.)

A Problem for America

But these things take time, if they can be done at all, and a crisis of hunger, war, and revolution could break out at a whim of the weather. The worst possibility would be a serious drought in the North American bread basket. Brown says droughts have affected this continent on roughly 20-year cycles, with the next one due in the 1970s.

So that dumps the immediate problem in American laps. It's a harsh tangle of politics, economics, and humanitarianism. For example:

- The United States could restrict its exports to ensure supplies of reasonably priced foods in this country. American bakers are demanding that this be done with wheat. President Nixon used this tactic last year for soybeans, when their price went up.

- The United States and other countries could set aside some of their food in a world-wide reserve system to be drawn on during shortages. Such a reserve system has been proposed by the U.N. Food and Agriculture Organization for discussion at the November world food conference.

- Or the United States could continue its present policy of selling as much as it can for as much money as it can get, while setting aside a small amount as aid for disasters like the famine now sweeping parts of Africa. This aid allocation has plummeted from a peak of 15.4 million tons of wheat and wheat products in 1966 to less than 2 million tons this year.

The Export Dilemma

Export controls are bitterly opposed by Agriculture Secretary Earl Butz, who says they would drive down farm prices, in turn reducing farmers' incentives to grow more. Controls also would reduce the \$20 billion that the United States expects to earn this fiscal year from agricultural sales, and which it needs to balance the soaring cost of foreign oil. If other countries also adopted such me-first policies, the outlook would be for drooping production in the "have" countries and even worse hunger among the have-nots.

An unchecked food-for-cash policy such as Butz prefers would be most likely to increase world production, most orthodox economists say. "The first assumption that must be made, if productivity is to increase, is that the farmer must make money," plant scientist Anderson says. But if the world's feed is sold to the highest bidders to feed their cows and pigs, what happens to the millions of human beings for whom \$5 wheat may be a death sentence?

A scheme of world food reserves would also tend to hold down production because the stockpiles would be put on the market whenever food got scarce enough to make prices rise. A spokesman says the 2.3 million-member American Farm Bureau Federation would be "completely against it." Because, he notes, if governments try to stockpile food in today's tight market, "you'll drive prices up farther."

The Strange Case for Automobile Safety and the Gasoline Shortage

Teacher Notes

Introduction

- Step 1: Define the problem.
- Step 2: Specify
 - a. the goals or objectives
 - b. the policy options
 - c. the related economic concepts
- Step 3: Analyze the consequences of each of the policy options.
- Step 4: After analyzing, use the results to evaluate options according to each goal.
- Step 5: Decide upon the best alternative relative to your established goals.

Often times when private and public decisions are being made by individuals and politicians, sometimes both fail to systematically examine a variety of alternatives before ultimately making a decision. The case of automobile safety legislation provides an excellent case and point where the question may be raised: did politicians carefully consider alternatives when passing the National Motor Vehicle and Traffic Safety Act in 1966 or was it railroaded through the political system by certain pressure groups in the political system. Sometimes pressures from different fronts result in sudden passage of laws where more time should have been taken discussing the implications if the law is passed. In a political frame of reference, the Gulf of Tonkin resolution and the National Safety Act have many similarities. In both cases Congress was dealing with a problem and in the process of making their decision failed to consider both the

possible alternatives and consequences of their decision. Although the two political situations are dissimilar in many ways, both resulted in decisions that imposed a cost involving billions of dollars on society.

Before going too far, please read the attached section of the editorial entitled "Stop the Juggernaut, Auto Safety Is Hurling Toward a Dead End." This particular situation provides an excellent opportunity to organize the application within a problem solving context. To help understand the framework, the outline of the problem solving structure should be presented to the student. After the students have been introduced to the problem solving structure along with reading the article, they should be ready to get involved. In this exercise, steps one and two will be provided. After these steps have been established the students will then become involved by applying the analysis. The analysis could be one-day discussion or extended study, depending on the objectives of the class.

Stop the Juggernaut

Auto Safety Is Hurling Toward a Dead End

In 1966, however, Congress, through passage of the National Motor Vehicle and Traffic Safety Act, made a distressingly wrong turn. Under a series of directors, some of whom have felt free, so to speak, to ride their hobby horses, the National Highway Traffic Safety Administration over the years has promulgated two score and more motor vehicle standards. Thanks to its zeal, automobiles today come equipped with energy-absorbing steering columns, high-penetration-resistant window glass, improved instrument panels, reinforced door structures, headrests, seat belts and interlocking systems that won't permit the car to start unless the belts are on. Down the road, if NHTSA and Nader have their way, loom further marvels of technology: fuel tank integrity, radar braking, air bags.

From a cost standpoint, such in-

novations have had a ponderable impact. For one thing, motorists' long-simmering wrath at the inconvenience and expense has begun to boil over. According to those who are pushing for air bags and other so-called passive restraints (no action is required of drivers or passengers), at least two out of five seat belts lie idle. Repair shops which specialize in ridding new cars of anti-pollution and safety devices, legally or otherwise, do a thriving business; in Detroit, a car can be completely "debugged" for ten dollars, in an age of inflation a modest sum and one which indicates heavy traffic. Weight-wise and in dollars-and-cents, rough estimates are available, too. Depending on the make and model, safety equipment has added 300-odd pounds to gross vehicle weight, and, with respect to the '74s, \$300 to the price (over \$500 by 1976). All told, including the extra

gas needed to move the added weight, safety is costing the not-so-happy motorist a sum approaching \$5 billion per year, and the end is nowhere in sight.

Like the federal bulldozer, the safety juggernaut is no economy model. For its huge outlay, the motoring public has precious little to show. By government decree, all '73s had to be equipped with bumpers that could meet low speed barrier tests, thereby reducing the frequency of front and rear damage. While the latter has fallen off, savings have been wholly offset by the higher cost of repairing the new bumpers. Volkswagen has just served notice on owners of Beetles made between 1968 and 1972 that seat and shoulder belts, improperly stowed, may be weakened by an accumulation of battery acid on the floor. Consumers Union has found four out of seven federally approved auto seats for children faulty. In December, 1972, a U.S. Circuit Court of Appeals delayed imposition of mandated passive restraints because the official test dummies (why should they be any different) failed to work right.

According to the Department of Transportation, the effectiveness of head restraints "has been very low," in at least one case, they allegedly have proven lethal. Josephine B. Hubbell, widow of a psychiatrist who died after striking a head-rest in his Chevy Nova during a rear-end collision, has just won \$2 million in damages from GM (which has filed an appeal). And the safety sta-

tistics furnished cold comfort. As we wrote last fall, deaths per million vehicle miles were down, but the decline "barely matched that of the 'Fifties, when Detroit was allegedly selling razzle-dazzle and Ralph Nader was still in school."

Thanks to the gasoline shortage, however, the free world lately has turned into a safety laboratory, with what can only be viewed as astonishing results. According to the National Safety Council, U.S. vehicle-miles driven in November and December lagged the year-earlier total by perhaps 2%. Yet, as speed limits throughout the country were lowered to 55 miles an hour, the number of highway fatalities in the two months dropped 9% and 19%, respectively. In January, with driving off perhaps 5-10% (Safety Council figures aren't available yet). U.S. highway deaths plunged 25%. (In Germany, a 62 m.p.h. limit cut the number of fatalities and injuries by three-fifths.) Even the National Highway Traffic Safety Administration seems impressed. It reports that 16 states with lowered speed limits in November showed a 15%-20% drop in the number of highway deaths, those which left them unchanged only 2%. NHTSA may not fully grasp the significance of such statistics, or may not want to, but the meaning is clear. In automotive safety, the U.S., by over-emphasizing the car and virtually ignoring the driver, has been hurtling toward a dead end. It's time to slam on the brakes and back up.

—Robert M. Bleiberg
Barron's, 3-25-74

Objective, Concepts and Procedures

Teacher Notes

OBJECTIVE:

To provide an opportunity for the student to examine a product or service that has been modified by government legislation and explore the pros and cons of the public policy.

CONCEPTS:

Demand, supply, allocative efficiency, opportunity cost, social benefit, social cost, and consumer sovereignty.

AUTOMOBILE SAFETY

79

PROCEDURES:

The suggested strategy for examining this issue will be a problem solving structure, however, the exercise may be lengthened or condensed according to your needs. After having the students read the article, the first two steps could be discussed in class having the class first define the problem and then developing steps one and two through class discussion.

Problem Solving Structure

1. Problem

The basic question to be raised is how much control should the government have regarding the inclusion or exclusion of safety devices on an automobile. Essentially the issue is — Should the government continue to place requirements on manufacturers rather than provide the resources for testing the equipment, making the results available to the consumer and then enabling the consumer to make the choice. The problem summarized could be stated as: **WHAT SHOULD BE THE ROLE OF GOVERNMENT REGARDING AUTOMOBILE SAFETY?**

2. Specification

A. Goals or objectives

1. Allocative efficiency (the distribution of land, labor and capital among different uses to produce the best combination of goods for satisfying people's wants, given their income.
2. Safety for passengers.
3. Providing the consumer with greater choice.
4. Implement safety measures for both new and old cars.

B. Options

1. To have manufacturers determine safety standards without government interference.
2. To let consumers decide what safety options they desire.
3. To continue with the Congress initiated National Motor Vehicle and Traffic Safety Act.
4. To have required and optional safety equipment.
5. To enforce more rigid driving regulations (e.g. lower speed limit).

C. Concepts

1. Allocative efficiency.
2. Opportunity Cost
3. Price System
4. Social benefit and costs
5. Consumer sovereignty

3. Analysis

(a) *To have manufacturers determine safety standards without government interference.*

The consequence of letting individual manufacturers determine the inclusion or exclusion of safety equipment would depend upon the profitability of the individual producer. If profitable relative to other options open to the producer, he would continue to include various safety devices. Since one car manufacturer doesn't have monopolistic control, if one producer started including safety equipment, while his competitors did not, the decision would be left to the consumer.

Thus, without government regulation there would probably be fewer safety gadgets on cars. As a result, the price of cars would be lower and there probably would be more automobiles being produced since some families would be responsive to the lower price.

(b) *To let consumers decide what safety options they desire.*

The first question to be raised would be: how can consumers intelligently decide what safety equipment to purchase and not to purchase? One function of government might be to provide subsidies to individual car manufacturers regarding the testing of safety equipment and then to make the information available to the consumer. The consumer could himself decide whether the safety equipment was worth his dollars depending on the information available.

For example, assume the additional price to the consumers of the extra safety equipment is \$50 million and could save 100 or possibly 1,000 lives. The question must be raised, is it worth it? Although questions related to dollars and lives are difficult to answer, they should be considered. In fact, if one could consider a basic car with no safety, along with successively higher prices, with more safety equipment, one would possibly find many people would be inclined to accept additional risk in trade for a lower priced car.

(c) *To continue with the Congress initiated National Motor Vehicle and Traffic Safety Act.*

If Congress continues to maintain current Federal auto safety standards, the cost cannot be ignored. When the Safety Act was first passed it was estimated that consumers would pay approximately \$1 billion dollars for the required safety features. The additional cost for safety features in many ways can be regarded as a tax on the consumer. Although people have been rather complacent about accepting this hidden safety tax consider the public outcry if Congress had alternatively passed an excise tax on automobiles to raise the necessary revenue for the safety equip-

Teacher Notes

ment. Although the two are identical in regard to the imposition of a cost on the consumer, the public reactions would be much different.

The editorial estimates that 1974 models have an additional three hundred pounds of equipment at an additional cost to the consumer of \$300 to \$500 by 1976. Consider the implications when all costs including additional gas are considered—the cost to the motorist is approximately \$5 billion per year.

(d) *To have required and optional safety equipment.*

In considering safety equipment, one should consider safety to both those within and outside the vehicle. Some safety devices have benefits to people other than occupants of the car. For example, a good steering and braking system would be two primary examples whereas a padded dash or collapsible steering wheel will benefit only those within the vehicle. Considering the private benefits (those only derived by passenger and driver) and social benefits (those who may be walking or driving near the vehicle) there may be a clear division of required equipment (benefit people other than passenger) and optional equipment (benefit only driver and passengers).

Where other members of society can be affected by improper brakes, it might be advisable to require autos to have the most efficient braking system. However, when considering safety devices within the car, why not leave it to the discretion of the person actually purchasing the car whether to include items as head rests, padded dash, etc.

Although the air bag has received extended coverage through the media, especially insurance commercials, General Motors has had difficulty selling them in the full size Cadillacs, Buicks, and Oldsmobiles. The cost is \$225 and according to a *Wall Street Journal* article on April 11, 1974, one dealer claimed he hadn't sold one to date. Experience, as evidenced with air bags, seems to indicate if given the choice some consumers will resist certain safety features that may not be as important in their budget as a car stereo.

(e) *To enforce more rigid driving regulations (e.g. lower speed limit).*

The newspaper editorial refers to one of the indirect benefits of recently experienced gasoline shortages, lower speed limits resulting in a significant drop in the number of highway deaths. The editorial concludes, "In automotive safety, the U.S., by over-emphasizing the care and virtually ignoring the driver, has been hurtling toward a dead end. It's time to slam on the brakes and back up."

Motorcycles and Public Safety

Teacher Notes

Evaluation Option

In evaluating the policy options, we will consider how each option relates to the previously specified goals. Each option will be discussed relative to the developed goals.

With options 1 and 2, both would achieve some degree of allocative efficiency. If manufacturers were free to operate without government interference, one would not expect them to add equipment if consumers refused to purchase the options, as evidenced most recently with air bags. However, a more helpful role for the manufacturer may be to provide information to the consumer regarding safety devices so he can make more knowledgeable decisions in the marketplace.

Option 3 appears to have resulted in misallocation of resources. There could be some difficulty with option 4, depending on what equipment was included as optional and required. With option five there seems to be early indications that the legislative process may have legislated up the wrong tree. Possibly the billions of dollars spent on research and the necessary resources to construct the equipment, could have been saved by seeking alternatives other than additional safety equipment.

Decision

The decision is up to the class, possibly after going through steps one and two, the class could be divided into committees and asked to generate their own decision according to their previously stated goals.

Evaluation Option

After completing the discussion on the pros and cons of automobile safety, one possible strategy for determining

Teacher Notes

what was learned from the previous exercise would be to assign the following editorial, "Motorcycles and Public Safety" and raise the question what should the National Highway Traffic Safety Administration do about the hazards related to motorcycles?

Alternatives to be considered related to the future orientation of the National Traffic Administration regarding motorcycles:

1. Should motorcycles be outlawed?
2. Should motorcycles be outlawed during rush hour traffic?
3. Should motorcycles be outlawed in metropolitan areas?
4. Should motorcycles have additional safety devices?
5. Should motorcycle drivers be required to fulfill different regulations?
6. Should motorcycles have lower speed limits?

In examining each alternative both costs and benefits to both the individual and society should be considered.

Motorcycles and Public Safety

DOES IT seem odd to you, as it does to me, that a Government that compels the driver of a 1974 automobile to be snug in a safety harness before his car will start, a Government greatly interested in air bags, padded dashboards, and all manner of safety-related bells, buzzers, and flashing lights — does it seem odd to you that such a Government permits the operation of motorcycles on public roads?

There are few more hazardous ways of getting from one place to another, short of being shot out of a cannon, than by riding a motorcycle.

Says Lewis S. Buchanan of the National Highway Traffic Safety Administration: "More than 80 per cent of the reported motorcycle accidents result in injury or death. A comparable figure for automobiles is 10 per cent."

A minimum amount of good will, I think, requires all of us to count to 10 before condemning another person's choice of fun. Motorcyclists pay taxes too, and they have their rights. But even though the nation's roads are for the use of many kinds of vehicles, we may properly draw the line when the evidence suggests that a certain type of machine, because of its very design, is unusually dangerous to the operator and any passenger.

There is a temptation to say, and some people probably do say, that so long as the motorcyclist's risk is mostly to himself, let him be. After all, motorcycles very rarely run down pedestrians, and in any encounter between a motorcycle and a car, the motorcycle is likely to lose.

This attitude, however, fails to take into account that motorcycles can be the indirect cause of auto accidents. Their presence often startles and confuses motorists because the narrow, two-wheeled vehicles are hard to see. (Notes the Government's Buchanan: "A pencil held at arm's length will obscure a cyclist only 100 feet away.")

There is special danger when a motorcycle approaches a car from the rear. There are blind spots in the driver's rearward vision that usually don't affect his seeing another auto, but seeing the slender motorcycle is another matter.

It is unnecessary to serve up a large plate of gore here. You have heard about the recent motorcycle accidents that cost an actor an arm and a leg, that put a Minnesota Viking football player in a wheel chair for the rest of his life, that left a New Jersey youth paralyzed from the neck down until his grief-stricken brother shot him dead in a mad act of mercy. But you probably have not heard about many of the less-publicized accidents that resulted in 2,747 deaths in 1972.

It is certain that the number of such deaths will increase greatly in the next few years. Again quoting Buchanan. "From registrations of less than 600,000 in 1960 the total of registered motorcycles has grown to about 4 million. It is likely that an additional 600,000 registrations [have been] added during 1973. It is probable that the use of motorcycles will continue expansion until about 10 per cent of all registered vehicles are motorcycles."

The National Highway Traffic Safety Administration, which is part of the Department of Transportation, recognizes the special hazards of motorcycle riding. And the agency is conscientiously pushing such safety precautions as improved cyclist training, crash helmets, periodic cycle inspection, and daytime use of the headlight.

If all the states adopted all the motorcycle regulations the Federal Government has urged, and if all the states enforced the legislation already on their books, Washington officials contend, the high motorcycle death rate would be reduced.

But even after all that can be done has been done we are left with

the nature of the motorcycle itself. It is not a suitable machine to mingle with cars, buses, and trucks on public thoroughfares. The rider is utterly exposed, any passenger is in equal jeopardy, bad roads and bad weath-

er enormously multiply the risks, and the motorcycle is so hard for motorists to see and to anticipate that its presence is an unjustifiable threat to public safety.

—Edwin A. Roberts Jr.
The National Observer, 12-29-73

FUTURE FEAR

Teacher Notes

Objective, Concepts and Procedures

OBJECTIVE:

The student will discuss the implications of continual or limited growth in the U.S. economy over time.

CONCEPTS:

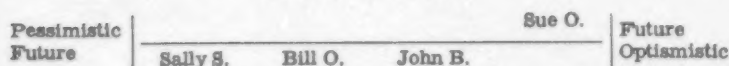
Stagnation, National Income, Capital, Economic Costs.

PROCEDURES:

The primary focus of this lesson is to have the students examine some problems regarding future economic growth within the U.S. economy. Before initiating the discussion, construct a value clarification line out of butcher paper and place in an observable location in the classroom. The location is important because this would better facilitate students changing their position on the line.

1. Construct a value clarification line of butcher paper (comparable to one illustrated below) and attach to a wall in the classroom.

U.S. Economy



Before discussing, ask students the following question, "What do you think the future prospects are for the U.S. Economy?" Let each express his or her individual preference on the value line.

Future Fear

Is the Economy Sliding Into Five or Ten Years Of Stagnation, Unrest?

**Some Observers See the U.S.
Following U.K.'s Decline
And Facing Low Growth**

Bitter Politics of Income Pies

By JAMES P. GANNON

Staff Reporter of THE WALL STREET JOURNAL

There is one dimension of the nation's economic condition that can't be found in all the official statistics, the economists' forecasts, the government reports. It is intangible, immeasurable, but important.

It comes across strongly when businessmen and economists are asked to look five to 10 years ahead, and to think out loud about what sort of American economic situation they foresee. Call it future fear.

It takes varying forms: A feeling that the U.S. is sliding down the British path of de-

cline toward economic stagnation. A belief that resource scarcities point toward slow growth and political strife over how to slice up a static national-income pie. A conviction that a political system that rewards politicians who deliver short-term benefits can't cope with long-term economic problems requiring sacrifice. A fear that we haven't learned from our past economic blunders and are doomed to repeat them.

A decade of economic, political and social turmoil produces somber moods and sober musing. Perhaps these visions are simply exaggerated extrapolations of the recent past into the near future. Waves of economic pessimism have swept over the U.S. before, especially during the Great Depression, only to ebb away amid subsequent prosperity. And since the current worries are focusing on the years just ahead, they aren't talking about the possibility that scientific advances later on could overcome the energy problems that confront the economy now.

Another word of caution: These views aren't from a cross-section of America; they come mainly from business people and economists—most, though not all, conservatives. Most of these are people with a major stake in the status quo, and with a fear that it is crumbling.

But even if their worries are way off-base as forecasts, they have some significance as influence on Americans' current thoughts and actions. Thus they're worth hearing.

Teacher Notes

Some Concluding Questions to Consider

2. Assign the first segment of the reading and then discuss the future focusing on questions such as:
 - a) How will the supply of energy affect our future lifestyle?
 - b) Will the future result in more government involvement within the economy?
 - c) What are future job prospects for the high school and college graduates?
 - d) What kinds of jobs will be in greater demand in five years, in 10 years?
 - e) What implications does a no-growth economy have for different socio-economic groups?

INTRODUCTION

Teacher Notes

During the Winter of 1974 and continuing through the Summer of 1975, the U.S. has experienced one of the worst recessions since the 1900's. Unemployment has skyrocketed to the unprecedented height of over 10% in some states and the prospects for a rapid recovery depend on many unpredictable variables. One of the variables, possibly the most critical, is the future available supply of energy. One further complication is that a large portion of our supply is foreign and its availability is dependent on the political mood of the Arabs.

However, before one becomes overly depressed, the past record of performance within the U.S. economy should not be overlooked. Although there have been ups and downs in the economy over the past four decades, the real growth (ability to produce goods and services) has averaged about 4% through our history. Thus, if past performance provides any indication of the future, the U.S. economy has always been able to come back.

Many people maintain different positions regarding the future of the U.S. economy. Some of the variance in position may be due to one's socio-economic position. However, one's age may flavor how he feels about the economy. Read each of the following and respond to the questions.

The Executive

Fletcher Byrom pulls the cellophane wrapper off a ham sandwich, pops the plastic lid from a Coke and invites a visitor to lunch in his Pittsburgh office, where he's chairman of Koppers Co., a diversified industrial concern. Mr. Byrom isn't a typical corporate chief executive. He reads books on philosophy and social change. He leads seminars for his middle managers. He thinks a lot, broods a lot.

"I see the potential for significant improvement in our economy, but I don't think it will be realized," he says. "In five to 10 years, we will be moving strongly in the direction of state control of capital intensive industries. It is already too late for the electric utilities. Our political system just won't allow corporations to make the profits they need.

"Look, we've got a political system that won't work. A Congressman has to get re-

elected every two years. The time frames of our office holders are incompatible with the problems we face. We keep proceeding with ad hoc responses to crises. We're basically escapists. We don't want to admit we have an energy problem, so even now we still don't have a energy policy in this country."

His solution is sweeping: a constitutional convention to redefine the goals of U.S. society, overhaul the political system (perhaps a one-term, nine-year presidency and longer terms for Congressmen) and establish an economic planning body to set long-term policies.

Mr. Byrom rejects the notion he's a pessimist. "I think we're in terrible trouble, but I'm suggesting we have a way out. The system has to be changed. I see no other way. The only concern I have is whether or not we have enough time."

The Executive

He refers to the possibility of more state control of certain industries. What would be some advantages and disadvantages?

ADVANTAGES

1. SOME PEOPLE MAY BELIEVE THIS POLICY WILL BE MORE FAIR TO THE GENERAL PUBLIC.

DISADVANTAGES

1. LACK OF FUTURE INCENTIVE TO PRODUCE MORE.
2. LACK OF FUTURE INCENTIVE TO DEVELOP NEW PRODUCTS.

What are some advantages and disadvantages to his suggested modification of the political system?

The Professor

Robert Lekachman, who teaches economics at the City University of New York, is hardly a conservative. "I'm from the respectable old left," which means wearing a shirt and tie and "belief in occasional haircuts," he says with a smile. Without any drama, he sketches out a coming age of scarcity.

"I think we are entering a long period of slower growth. I take seriously the resource scarcities. We've reached the end of cheap energy. Energy shortages will act as a drag on growth. Income will be shifting out of this country to the oil producers. The prospects for improvement in the American standard of life thus are much less than they've been.

"This has very intriguing political implications. I think we are going to enter a pe-

riod where the politics are going to center on income redistribution. This is a very painful sort of politics. You see, in the politics of growth, you can say that there is going to be more for everybody. But in the politics of redistribution, if someone is going to get more, someone else is going to get less. This means more confrontation between groups."

In a slow-growth society, people who have jobs and incomes would have to support growing numbers who don't, the professor says. This would cost the middle class dearly, he thinks. "It's going to cost all upper and middle-income people dough. You won't be able to finance things just by raising taxes on people in the \$150,000-a-year bracket. There just aren't enough of them. You'll finance it by taxing people in the \$25,000-and-up brackets. And that includes professors."

The Professor

Professor Lekachman suggests, "We've reached the end of cheap energy." How will rising costs of energy affect our life style?

1. TRANSPORTATION
2. FORM OF ENERGY USED (RELATIVE PRICING)
3. FUTURE EXPLORATION FOR NEW OR ALTERNATIVE SOURCES OF ENERGY
4. FORCED CUTBACKS IN PRODUCTION—POSSIBLE LAYOFFS

How is income from energy being shifted to other countries?

HAVE CLASS CONSIDER THE SUDDEN INCREASE IN PRICE OF FOREIGN OIL—UP FOUR TO FIVE TIMES WITHIN A YEAR. THESE ADDITIONAL DOLLARS ARE BEING SHIFTED FROM THE U.S. CONSUMER TO THE FOREIGN SUPPLIER.

How does the increasing price of energy result in income redistribution?

THE INCREASED PRICE OF ENERGY MAY BE REGARDED AS TAX IMPOSED UPON U.S. FOR RISING COSTS OF ENERGY—THUS SHIFTING OUR DOLLARS TO OTHER COUNTRIES ENABLING THEM TO PRODUCE MORE GOODS AND SERVICES.

Have class consider implications of the last paragraph as they become productive members of society in future years.

(OPEN-ENDED QUESTION)

High School Graduate

"I've heard that the economy's in pretty bad shape," says Joe Schmoe, a graduating high school senior, when asked about his view on the state of the economy. Joe is 17, a white male, no special skills, and will be graduating from high school in two days. Joe has been trying for a month to find a job for the summer to help pay his way through college.

"Finding a job is really tough these days. I've never worked before, so I have no experience. Everywhere I've applied for work either there just aren't any openings, they've already hired the older, experienced

college kids, or you have to be a member of a minority group. I guess the only way to get a job is to know someone."

When asked about the future 5-10 years of our economy, Schmoe answers, "I'm not worried about it. From what I've seen, the economy seems to go in cycles pretty much, and it's so low now it can only go up."

As Joe hops into his jacked-up, souped-up Dodge 'super Bee', he says, "I think the country will come out of this unemployment s-age okay in the long run; I'm just worried right now about how I'm going to find a job to pay for gas for my car now and college in the fall.

As a concluding activity, have class consider the hypothetical student, Joe Schmoe. Do you agree or disagree with his prognosis of the economy? Explain why.

In conclusion, give students an opportunity to change their position on the value clarification line.

To Guide Your Reading

1. Economic Stagnation
2. Extrapolations
3. Status Quo
4. Capital-Intensive
5. Income Redistribution

Gas Saving Engines?

Teacher Notes

Objective, Concepts and Procedures

OBJECTIVE:

To have students consider the pros and cons (costs and benefits) of government involvement in future technological development.

CONCEPTS:

Social cost, social benefits, private cost, private benefit.

PROCEDURE:

In this particular lesson, the focal point should be: Is government assistance necessary in the development of a gas-saving engine? If necessary, how many and from where should the dollars be derived? The suggested strategy is that the class be divided into committees to come up with possible recommendations.

The Role of Government

Several of the previous lessons have considered government's role in the economy. An area that has been getting increasing attention in recent years is the development of a gas-saving engine. The natural question to raise would be—Should the development of this gas-saving technology be left to the private sector or subsidized by the public sector (government). The following article presents an overview of four gas-saving possibilities that are currently being researched. After reading the article consider this question: Should government or private industry be responsible for spending dollars to promote this form of technology?

In considering the extent of government involvement, if any, a review of the previous section titled, "Modifying the Market System," may be helpful.

GAS SAVING ENGINES?

...Despite progress, production

isn't likely for many years.

By Paul C. Hood

FROM ANN ARBOR, MICH.

If you're expecting quick technical miracles to produce an automobile engine that will end air pollution and wean us away from petroleum, forget it. Some new power sources seem sure to be developed eventually. But chances are today's infants will be coping with essentially the same kind of auto power plant you're using when they're old enough to drive.

No other conclusion seems reasonable after hearing an engineering report session sponsored here by the division of advanced automotive power systems of the Energy Research and Development Administration. The technical experts devoting their skills to producing an alternative to the conventional gasoline engine are the first to concur.

But there's every reason to believe that the days of the spark-ignition, piston-type auto engine are numbered. Within 20 years the first alternative power systems should be coming off the production lines.

Four Possibilities

What will the new engines be? Best bets today appear to be gas turbines, steam adaptations, and the European Stirling engine, with an outside chance for electric models. Reports indicate good progress on each of these systems as researchers seek to meet two critical standards: low emission and fuel economy.

"There is not an engine on the list today that could double the fuel economy with known technology," says George Thur, chief of the power-systems division.

When the Government's big push on auto engine-alternatives started in 1970, the goal was primarily to cut back emissions to Federal Clean-Air Act requirements. Since then concern over a dwindling and more expensive petroleum supply and dependence on foreign oil may have taken precedence; the exploratory work started in the En-

vironmental Protection Agency now has been assigned to the Energy Research and Development Administration, organized only last January.

Short-Term Savings Important

Coupled with the engine research are programs to produce synthetic fuels and to modify the internal-combustion engine for short-term economies.

And don't sniff at the idea of tinkering with today's vehicles to produce limited savings for the short term. Because of the fairly long road life of motor vehicles, Government analysts figure bringing the national average fuel consumption up to 28 miles per gallon in 1980 would save more gasoline by the end of the century than having a 40 m.p.g. car introduced in 1985 or a 60 m.p.g. car in 1990.

Modifications of existing engines already are on drawing boards, and some are getting to the experimental hardware stage. Federal energy officials are pinning their hopes not just on improvements in the gasoline-combustion process but also on more efficient transmissions with infinitely variable speed, improved accessory drives, and even devices for using exhaust heat to improve engine efficiency.

Such stop-gap measures could buy time to put revolutionary engine changes into use. But time is not all that's needed: Engineering skill is required to polish up the alternative power plants, and plenty of money is needed to effect the manufacturing changeover.

Research-and-development executives for two of Detroit's Big Three auto makers agree roughly on the requirements. From the time a satisfactory, tested experimental engine is completed, they estimate it will take a minimum of 10 years and \$500 million to bring it to full production.

And there's always the risk. "If the industry were to go to the gas turbine and we had some kind of flap of the type that

surfaced on the catalyst [system for auto-pollution control], something unknown and unforeseen, the industry could go bankrupt," says George Huebner, Chrysler director of research.

Huebner is the leading advocate of the gas-turbine system and has guided Chrysler research through six generations of turbines. A fleet of 50 turbine-powered cars has demonstrated the concept world-wide, and the cars have been an auto-show staple for years. Development of a seventh generation is under way.

In the turbine, air is compressed and then forced into a burner where fuel sprayed through a nozzle is burned at a temperature of about 1,850 degrees. Hot gases from the combustion drive both an air compressor turbine and turbine blades connected to the car's drive shaft.

'It Will Burn Anything'

In these fuel-conscious times the burner has a fascinating feature: "It will run on anything that will run through a pipe and burn," says Heubner. In actual tests that has meant gasoline, diesel fuel, kerosene, peanut oil—even tequila and perfume.

Heubner is confident that the seventh-generation engine will meet all 1978 emissions standards and predicts it will show a slight improvement in fuel economy over a conventional car.

"At high temperatures," says Heubner, "the turbine looks as if it will be one of the most efficient power plants that we have ever seen." To gain those high operating temperatures at reasonable cost, ceramic parts are being developed to replace components, such as the turbine wheels, now made from expensive steel alloys.

Durability Looks Good

The engineer ticks off some of the engine's advantages: durability (some have run 150,000 to 175,000 miles), low maintenance (no tune ups, no oil changes), quiet performance, no central-cooling system, and no cold-start problems. On the negative side, most of the problems now encountered are in finding materials to withstand the extreme operating heat.

(The National Observer, May 25, 1975)

Summary of Remaining Article

Steam Turbine

- ADVANTAGES:** 1. Meets proposed emissions standards.
2. Durable.

- DISADVANTAGES:** 1. Has not been seriously considered by industry over last 30-40 years.
2. Fuel diseconomy.
3. Bulky.

European Stirling Engine

- ADVANTAGES:** 1. Meets emissions standards.
2. Ford tests with Torino found fuel economy gain over conventional engine.
3. Quiet.
4. Multifuel capability.

- DISADVANTAGES:** 1. Size and weight.

Electric Cars

- ADVANTAGES:** 1. Quiet.

- DISADVANTAGES:** 1. Need breakthrough in battery technology.

Discussion Guide

The article should be assigned, with the class outlining the advantages and disadvantages of the turbine engine as a gas-saving technological advancement. Afterward, they should consider three other alternatives which are summarized from the original article. The class could possibly first discuss the general advantages from their background knowledge of this area.

Following the discussion, the class could then be divided into task force groups with the objective of developing a future recommendation regarding the role of government in this critical area of research.

In formulating a general recommendation, each group should consider what engine design they would recommend and secondly where the research dollars should be obtained. The following questions could be considered as guidelines.

1. If government subsidizes research, from what sources should the dollars be obtained?
 - a. PERCENTAGE OF EXISTING GASOLINE TAX.
 - b. PERCENTAGE OF PROFITS FROM OIL INDUSTRY.
2. Are possible improvements in engine technology the responsibility of private industry?
 - a. INVESTMENT TAX CREDIT FOR ALL CAPITAL SPENDING IN THIS AREA OF TECHNOLOGY.
 - b. LOWER CORPORATE TAX RATES FOR THESE SPECIAL INDUSTRIES.

THE ABOVE GUIDELINES ARE NOT MEANT TO BE COMPLETE, ONLY PRELIMINARY SUGGESTIONS. IT IS RECOMMENDED THAT STUDENTS ENLARGE THE SCOPE OF THEIR UNDERSTANDING THROUGH ADDITIONAL READING AND POSSIBLY INTERVIEWING AREA BUSINESSMEN (ESPECIALLY CAR MANUFACTURERS OR RELATED INDUSTRIES).

IN THE DISCUSSION OF THE ROLE OF GOVERNMENT IN SUBSIDIZING A PRODUCTIVE EFFORT, IT

MIGHT BE HELPFUL FOR THE STUDENTS TO CONSIDER THE PRIVATE AND SOCIAL COSTS AND BENEFITS OF A TECHNOLOGICAL IMPROVEMENT. SOME EXAMPLES OF THE COSTS AND BENEFITS OF THE GOVERNMENT SUBSIDIZING THE CAR MANUFACTURERS TO PRODUCE A TURBINE ENGINE MIGHT BE:

PRIVATE COSTS

1. Increased price in cars.

PRIVATE BENEFITS

1. Smaller fuel bill.
2. Increased sales to auto manufacturers.
3. Ability to burn a variety of fuels.
4. Durability.
5. Lower maintenance costs.

SOCIAL COSTS

1. Tax dollars that could have been used elsewhere.

SOCIAL BENEFITS

1. Cleaner air.
2. Less noise.

ALTHOUGH IT IS DIFFICULT TO PLACE DOLLAR SIGNS ON EVERYTHING, ULTIMATELY WHAT THE STUDENT SHOULD CONSIDER IS HOW MUCH BENEFIT WOULD SOCIETY DERIVE FROM SHARING PART OF THE PROJECTED \$500 MILLION BILL TO BRING THE TURBINE ENGINE TO FULL PRODUCTION—WOULD ADDITIONAL GOVERNMENT DOLLARS SHORTEN THE ESTIMATED TIME SPAN OF 10 YEARS?

GENERAL GUIDELINES FOR TASK FORCE COMMITTEES MIGHT BE—

1. Consider the costs and benefits of each alternative.
2. To ultimately recommend the alternative that would result in the greatest benefit relative to the costs.

Summary Glossary of Concepts Related to Readings*

Competition, pure or perfect: so many buyers and sellers of a standardized product that no one seller or buyer can dictate price. Perfect competition implies perfect knowledge by buyers and sellers of conditions in the market.

Consumer sovereignty: the consumers getting what they most want. In a market economy, the goods mix is determined by consumers' purchases. The imposition of federal safety standards on automobiles is an example of infringement upon consumer sovereignty.

Demand, law of: the higher the price, the lower the quantity demanded, and vice versa, other things remaining the same.

Equilibrium of supply and demand: the price at which quantity demanded equals quantity supplied.

External cost: the difference between the total cost of an activity to the surrounding area and that part of the cost (the "private cost") incurred by the persons undertaking the activity. The burning of a bonfire in one's backyard would result in external costs to the neighbor.

Factor mix: combination of inputs or factors of production. The typical factor mix consists of land, labor and capital used to produce a good or service.

Fiscal policy: decisions about total government expenditures and taxes, particularly those of the federal government. The government may use fiscal policy—either modify the tax structure or expenditures—to stabilize the economy, i.e., to achieve full employment and capacity output without inflation.

Inflation: rising prices; an increase in a price index. The causes vary, but usually arise from excessive fiscal and monetary policies relative to the economy's capacity to produce.

Mixed economy: a term referring to the industrialized econo-

*The glossary is very basic and a basic economics textbook would be a useful reference tool in the classroom.

mies such as the United States which are still basically free private enterprise, but which have admixtures of government regulation to achieve certain goals as economic justice, security, freedom, stability or growth.

Money: Generally can be categorized in three areas:

1. anything commonly accepted as a means of payment.
2. currency outside banks plus demand (checking) deposits.
3. currency outside banks plus demand deposits plus time (savings) deposits in commercial banks.

Opportunity cost: the amount of any other commodity given up in order to produce or purchase a good or service. Attending school would result in an opportunity cost to the individual.

Prices, role of, and price system: the price signal plays a major role in the allocation of resources in the United States. A rise in the price of a good or service signals the need to produce more of it and shows that consumers desire more of that good or service than is currently available.

Profit: the difference between total revenues and total costs.

Rationing: 1. the division of a fixed supply among buyers. 2. non-price rationing administered by the government, e.g., coupon rationing with gasoline.

Scarcity, law of: principle that there are not resources available to produce everything that people want.

Shortage: excess of quantity demanded over quantity supplied. Results in competitive markets from price being below equilibrium.

Social benefit: the total benefit of producing a good or service, irrespective of whether the consumer or someone else gets it; social product.

Supply and demand, law of: in a competitive market, price tends toward an equilibrium at which quantity demanded equals quantity supplied.

Surplus: excess of quantity supplied over quantity demanded. Results in competitive markets from price being above equilibrium.

Price Supports: Artificial prices imposed by government that usually result in surpluses because producers are encouraged by the higher price to produce more of the commodity.